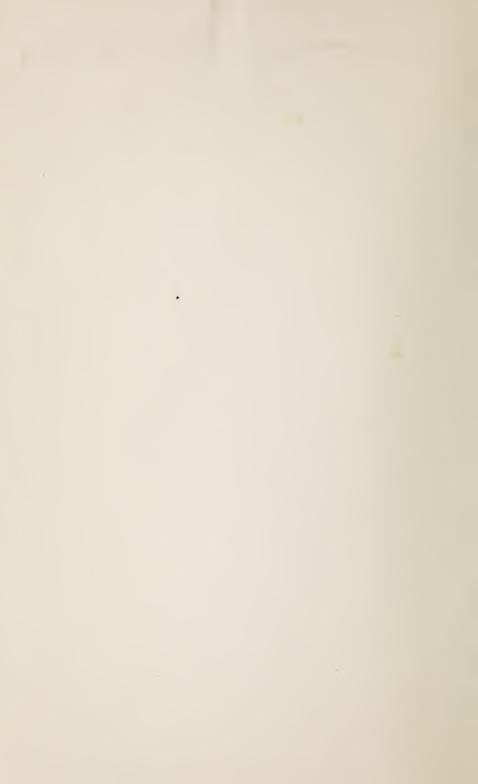


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PRINT RESTORATION AND PICTURE CLEANING.

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PRINT RESTORATION

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PICTURE CLEANING

AN ILLUSTRATED PRACTICAL GUIDE TO THE RESTORATION OF ALL KINDS OF PRINTS

TOGETHER WITH

CHAPTERS ON CLEANING WATER-COLOURS, PRINT "FAKES" AND THEIR DETECTION, ANOMALIES IN PRINT VALUES, AND PRINTS TO COLLECT

BY

MAURICE JAMES GUNN

SECOND EDITION, REVISED

"THE BAZAAR, EXCHANGE AND MART"

BREAM'S BUILDINGS, E.C.4

1922

PREFACE.

In the ensuing pages I have endeavoured explain in as simple and thorough a manner as possible the various operations have found most successful that T dealing with the restoration of engravings. has not been deemed desirable enter fully into the mysteries of picture (oilpainting) restoration, as the operations entail an intimate knowledge of the art of painting, inasmuch as the majority of pictures in need of restoration require more or less re-painting. For obvious reasons, therefore, this must be left to an artist who thoroughly understands colourvalues and the tendency of various pigments to change after a few weeks or, it may be, months. Still, sufficient space has been devoted to this branch of the subject to enable an ordinarily intelligent person materially to improve the appearance of an oil-painting.

Immediately following the chapters on the cleaning and restoration of prints, I have ventured to deal with what may fairly be termed cognate subjects — Spurious Prints, Anomalies in Print Values, Making Oval Mounts, etc.—in the hope that these sections will materially add to the utility of the volume. As may readily be imagined, the book will fall into the hands of numbers of small dealers and amateur collectors, and as it is those who are the oftenest imposed upon by the plausible and clever "faker," the few words of warning in respect of the subjects touched upon may not be considered matter out of place.

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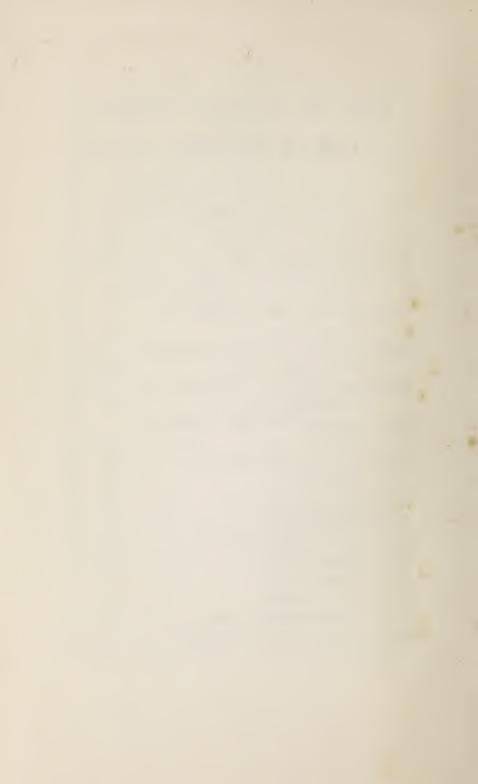
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PRINT RESTORATION AND PICTURE CLEANING.

CHAPTER L

INTRODUCTION.

It may be taken for granted that among the many who possess pictures and prints there are few who do not own something which would not be improved both pictorially and in point of value were it subjected to a process of cleaning. At present, so far as the average person is concerned, this involves the enlisting of the services of a professional restorer, with its consequent expense. It is, therefore, with a view to educating the amateur up to the standard of the professional so far as actual cleaning is concerned that this book has been produced.

In the ordinary way a few years will suffice to produce spots on an engraving or a drawing, particularly if the wall be at all inclined to dampness. Moreover, unless remedies are applied the print or the drawing will go from bad to worse, and ultimately rot. From this it will be deduced that it is as well to remedy matters as quickly as possible. If the instructions given in this work are carefully followed, they should enable an average intelligent individual to deal with his own prints and pictures in such a manner as to improve their appearance, and give to them a fresh lease of life. Again, it may very well happen that the lover of Art may find in some obscure quarter a picture or an engraving that owing to some blemish appears to be worthless. To be able to deal with such blemishes—to remove dirt, varnish, &c., and to remedy other defects—should provide not only a very pleasurable employment, but ofttimes a very profitable one, for calling in outside assistance, with its attendant expense, will be avoided. Throughout the work will be found a fairly comprehensive list of such conditions, &c., as will at once denote whether or not a picture or a print will lend itself to cleaning, and it will be advisable to apply the tests suggested prior to attempting anything further, as injury or even disaster may thereby be averted. In any case, I would urge the absolute necessity for extreme caution, and, in the earlier experiments at any rate, the advisability of treating something of little or no value.

One of the great charms of cleaning a print, quite apart from the pleasure it affords or the knowledge that it may considerably enhance its value, is the fact that it may be conducted at a very small outlay of materials. The actual necessaries are singularly few; while the chemicals that will be required for bringing about the various results that will be the objective of the intelligent cleaner are neither expensive nor numerous. Again, the work may be conducted in any ordinary room in which there is a good light, and this again is an advantage in the prosecution of the hobby, whether conducted for mere pleasure or ostensibly with a view to profit. Nor is the work of a kind suited only to one sex-men. There is not the slightest reason why women should not prove quite as capable as men. Indeed, I would go a step further and say that much of the work entailed is, if anything, better suited to the more delicate handling of women than men, and there is not the slightest reason why, once the A B C of the subject has been thoroughly learned, women should not, equally with men, enjoy the reputation of being capable restorers, and by such means add to their incomes. It is, I know, in these days almost rank heresy to suggest yet another way in which the two sexes should compete, yet at the risk of this I have no hesitation in saying that the whole of the operations incidental to the successful cleaning of prints and pictures could be undertaken by any woman of average intelligence, and a fresh field for her enterprise thus be secured. Still, by whichever sex the work is taken up, one of the earliest considerations is the actual materials required, and these will next be discussed

So far as I am aware, this is the only published work in which the methods for the cleaning and restoration of prints are fully detailed, and as the advice given is the result of many years' experience in dealing with the subject of print-cleaning, &c., for the trade, it may be regarded as thoroughly practical. Nothing has been put down here that has not been tested over and over again. At the same time should any difficulty be experienced, a letter addressed to the Editor of *The Bazaar* stating specifically wherein it lies will be assured of a courteous reply.

Where oil-paintings are concerned, the field of operations as regards the general worker are necessarily more restricted than in that of prints, by reason of the fact that actual restoration needs a colour-perception and an artistic skill of the highest order. Still, in surveying the possibilities of the subject in Chapter VIII. I have given sufficient information to enable anyone to clean a picture or to execute such slight repairs as ordinarily come within the scope of the small dealer or the average collector.

CHAPTER II.

PRELIMINARIES.

Materials Required.

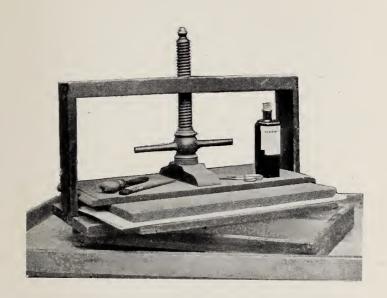
Assuming that the reader has decided to approach this subject practically, it will be necessary to obtain the articles I now propose to enumerate. First, there should be two wooden zinc-lined trays, one being approximately 2ft. 6in. long by 2ft. wide and 3in. deep for small prints, and the other 4ft. 6in. long by 4ft. wide and of a similar depth to the foregoing for large work. Any packing-case maker or dealer in photographic sundries should be able to supply these. For still smaller prints an ordinary china tea-tray or a dish will answer admirably. Half a quire of thick white blotting-paper of the largest size procurable, and preferably which has not been folded, will be necessary.

Or, better still, obtain from a photographic dealer some blotting-boards, as they are termed; these may be had up to 36in. by 30in. Two pieces of thick glass cut so that they will permit of easy removal to and from the trays will be wanted for use as supports when handling wet prints. Next order from the chemist a Winchester quart of Liquor Sodæ Chloratæ in a sealed glass-stoppered bottle. This is the principal cleaning agent, and care should be taken to prevent the escape of the chlorine gas from the mixture. There should be no difficulty experienced in obtaining this or any other enumerated article, but should there be, a query should be addressed to the Editor of The Bazaar

A small camel-hair brush together with an ordinary paste-brush practically complete the requirements for dealing with an average print that has become "foxed," water-stained, brown with age, or in which there is discoloration due to size in the paper. In short, Liquor Sodæ Chloratæ will clean almost any print that has not been varnished.

Still, an ordinary screw linen-press (Plate I.), if it can be procured, is a valuable adjunct to the print-restorer's outfit, and as such a one may be picked up second-hand or at a sale for a few shillings the cost need hardly enter into consideration. This appliance enables the operator to subject a print to considerable pressure, which is invaluable when drying between blotting-paper or when attempting the removal of creases. Again, a pair of stout drawing-boards, from 1/2 in. to 1 in. in thickness and 36in. in length by 30in. in breadth, will be found of great service in dealing with prints larger than the press. By some these latter may probably be regarded in the light of things that might be done without: but I am inclined to view them as indispensables where serious work is contemplated.

In addition to the materials required, and which have been enumerated, it will be as well if I refer to one or two little implements that will more than repay their being in the possession of the print-restorer. In these pages reference is made to an ordinary spoon used



A PRINT RESTORER'S OUTFIT.

Apart from the actual cleaning-agent, an ordinary screw linen-press as shown is one of the most useful items.



to anneal pulp in filling worm-holes, and also in treating a crease that is being removed from a print. The spoon will answer after a fashion, but there is always a slight doubt as to whether the pressure is being brought to bear upon the required spot. In order to obviate this uncertainty, I would recommend the employment of a tool that offers greater facilities for observing the work in progress. This is known as a burnisher, and is made in a variety of materials and shapes. Such a one made from agate, and mounted in a wooden handle, may be bought cheaply, and the best shape in dealing with inlaying is one that resembles a hockeystick. As a substitute that is, at the same time, capable of giving entire satisfaction, I would recommend the handle of a bone or an ivory toothbrush, and one possessing an upward curve is the most useful pattern. This will be found to be invaluable where it is desirable that local pressure is needed to bring into thorough contact paper that has been pasted together as described in the section on "Inlaying," or mending a print. Another inexpensive instrument that will answer all these purposes, and costs a few pence only, is a bodkin mounted in a plain wooden handle, and which, when not in use, is screwed into a turned wooden sheath. The fine steel point is often useful, and the whole thing, which in shape is something like a paviour's rammer, can be used with great advantage in annealing paper. For use in the removal of fly-marks from a hard-surfaced paper the point of this instrument is extremely valuable.

Ascertaining the Chances of a Print Cleaning.

The next point for consideration is to ascertain what are the chances of the print cleaning. In doing so it is of the utmost importance to determine the condition of the paper—i.e., whether sound or rotten. First, therefore, carefully examine the surface for numerous tiny blisters scarcely larger than a pin's point; also hold the print horizontally if it be unmounted and note the rigidity of the paper and whether it crackles when shaken. A limp and almost noiseless response when shaken suggests long

exposure to damp and "perished" paper. Prints in this condition will sometimes fall to pieces when placed in the bath, and in any case their treatment is a matter of extreme delicacy and the result very doubtful. On the other hand, if the paper is sound there is scarcely any stain that will not yield to treatment. The presence of the tiny pin-point blisters is strongly against the print lending itself to successful cleaning. These signs are also indicative of perished paper, and the bath will cause the surface-ink to come away, leaving the print pitted with innumerable whitish marks that necessitate a great deal of careful stippling to render them fairly invisible. In fact, the more delicate portions of the engraving must always bear traces of the injuries thus sustained. This form of damage is usually associated with prints that have been strained on canvas and hung on a damp wall without any protection at the back.

In the case of varnished prints a simple and certain test as to the likelihood of their cleaning may be made as follows. Carefully scratch the surface with the finger-nail or with something

sharp, selecting an unimportant and wellvarnished portion of the surface for the purpose. A white mark will at once be the result, provided the varnish has a spirit basis, and this is proof positive that the print will clean. Should little or no impression be made the varnish will be oil, and its successful removal a more difficult, and in many cases an extremely doubtful, matter. In days gone by it was customary to publish prints already strained — i.e., mounted on canvas and stretched on a wooden frame; these were for the most part sporting subjects, and, as a rule, they lend themselves readily to successful restoration, as it was the custom of the publishers previous to applying spirit varnish to size the print. This had the effect of preventing the shellac from penetrating the paper, and a print so treated will come out like a new pin except in cases where in the course of time the surface varnish has been knocked off, thus allowing dirt of one kind or another to penetrate the paper.

Oil stains are another source of trouble, and when of long standing extremely difficult to deal with. Some stains frequently look like oil, but in reality are not. In order to determine this point apply the following tests. Examine the paper to see if the stain is equally visible on both sides of it. If it is not, then it is not due to oil or grease. Another test is to moisten the surface of the stain and see if the spot becomes apparently dry and the moisture goes through to the back. Should this be so, it is another argument against the oil theory.

Fly-marks will generally yield to treatment, except in the case of a very soft, porous paper and a greasy diet on the part of the fly.

Mildew will generally brush off, but for complete removal a bath is necessary. It will be of value to remember that a print, particularly when in colours, which has become brownish through age, &c., will in nine cases out of ten be of twice the quality and value when the dirt that has killed the contrasts has been removed.

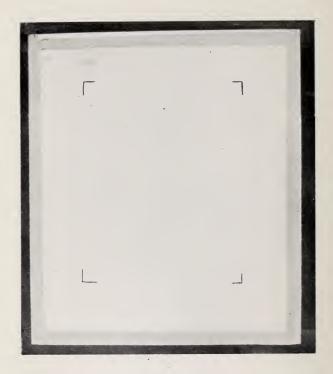
Ink-stains will in most cases yield to the treatment to be described later.

Pencil-markings should be erased prior to the print being wetted or they will become very difficult to remove. This may be done with clean rubber or with bread.

Most colour-prints were heightened here and there with pigment, and where lead was present oxidisation has sometimes occurred, resulting in the colour-surface becoming almost black, and, in the case of the whites, deteriorating considerably. This is nearly always so with old hand-painted fans. The appearance looks alarming, but there need be no fear as to the result. A B.P. solution of peroxide of hydrogen carefully painted upon the discoloured portion will revive the original colours in a few moments. This agent may be used with great success in beautifying almost any colour-print, and, as it is quite harmless, its use is to be strongly recommended.

To sum up: Beware of the print with the limp appearance and blistered surface, and also one that has been unsuccessfully cleaned, particularly when the varnish has not been completely removed. Almost any other stain will





METHOD OF LAYING DOWN A PRINT.

The illustration shows a sheet of backing paper stretched on support and marked to indicate position of print. The inside border shows where the paste was applied prior to mounting.

clean, and in ninety-nine cases out of a hundred Liquor Sodæ Chloratæ will effect the object in view.

Failures and How to Avoid Them.

However careful one may be in attempting to carry out instructions, circumstances are bound to arise which will surprise and vex the operator, so that a few remarks on the most likely sources of failure will not be amiss.

When laying down a print on paper, do not use a support, such as thin glass, that is likely to break; the pulling strength of a piece of stretched paper when drying is enormous. To obviate this and to facilitate handling with a greater degree of safety, have the glass cut to fit an old narrow frame with a fairly wide rebate, and paste the glass in position with strips of paper; this is far preferable to tacking in with brads, which constitute a source of danger to the glass. When mounting a sheet of paper on the support (Plate II.), use a good flour-paste, and do not extend the mountant to more than an inch beyond the edge of the paper;

this area of holding surface is quite sufficient. Thoroughly wet the paper prior to sticking down, and leave for a few moments until the paper has absorbed sufficient moisture, then dry off the surface moisture where the paste is to be applied; this will increase the holding power.

In selecting a paper on which to mount a print, see that it is as stout as or stouter than the paper on which the engraving is printed; this applies particularly to a torn print. When marking the position to be occupied by the print, remember that when the paste has been applied the print will be nearly half an inch larger either way, due to the moisture expanding the paper. Always leave plenty of space between the pasted portion of the mount and the edge of the print, as when cut away from the glass the pasted portion cannot be removed, and if any portion of the print be permitted to overlap it follows that proper removal from the glass or other support is impossible. Glue as a mountant is unsuitable, and should not be used.

In placing the prepared mounting-paper on the glass, hold by the thumb and first finger of





LAYING DOWN A PRINT.

Method of handling a pasted print when arranging it in position on mount. The top corners where held between the fingers are the last portions to fall into position.

both hands, just inside the pasted portion (Plate II., which has been shaded for the purpose of demonstration). Allow it to hang down naturally, and when the bottom edge is in position on the glass, lower away gently, when the air will be excluded, and the paper should show a smooth surface. The portion held between the fingers is, of course, the last to be allowed to fall into position (Plate III.).

Never remove the mounted print from the glass until quite dry, and do not mount the print until the support is at least half-dry and quite smooth.

Remove all inequalities from the paste, and look out for loose hairs from the brush. Always soak a new brush before using; this causes the bristles and binding to swell and at the same time renders the former less liable to be "shed." If on attempting to remove canvas from a print the paper is found to be skinning—that is, a portion remains on the canvas—desist, or the print may be torn; in any case, it will be of unequal thickness, and will necessitate laying down. In these circumstances it must be first

soaked (canvas uppermost in tray), and then, if necessary, very hot water poured on to loosen the paste. Be careful to remove all old paste from the back of the print prior to drying, or cockling will result. Work in a room free from dust, and have plenty of table space.

Use the cleaning agent as weak as possible; over-cleaning is as bad as dirt. Never continue to bleach a print until all stains disappear; the last 25 per cent. will vanish as the print dries. Keep your blotting-paper covered up when not in use and free from dust. Hang over a clean string line to dry when finished with. Keep the Liquor Sodæ Chloratæ in a glass-stoppered bottle. If, after cleaning, the colours or surface of a print when dry have a dead appearance, white of egg forms a harmless and excellent remedy, and is invaluable in the case of a sporting print, where it has been necessary to replace colour that has "flown" during cleaning. It gives a luminosity to otherwise dull colour that is essential to the whole appearance of a print. Never use chloride of lime, as it rots the paper and leaves a white deposit that is very difficult to

remove. Common soda used in conjunction with chlorinated soda will dissolve most printer's ink, or a good deal of it. Removing varnish from a print with spirit is not to be recommended, as the varnish becomes re-formed and liable to penetrate the paper where the surface is broken or the sizing has perished. Prior to cleaning a hand-coloured print, carefully note the various colours, as some of them are almost sure to "fly," and it is advisable to re-colour as nearly as possible. In soaking off anything that has been glued use nothing but cold water, and it will be a simple matter. Refrain from attempting to remove a mount while dry.



CHAPTER III.

DEFECTIVE PRINTS.

In the previous chapter attention was directed to the methods of ascertaining the possibility of cleaning prints damaged in different ways. Here it is proposed to consider some other defects in detail and to suggest the best means of dealing with them individually. In addition, various measures of renovation, such as mending a hole, worm-holes, inlaying, &c., will be described. First as to

Oil and Grease.

This subject is one that has usually been viewed with more alarm than seems to be warranted, and many fine and valuable prints have been rejected on account of this blemish. Personally, I have found little

trouble in dealing with the subject successfully, and I have no doubt that the following simple operations will present few difficulties to those who attempt to put them into practice. The directions are based on actual experiments and not mere assumption. The first case I treated was that of an old Bartolozzi print having several large grease-spots, and at a glance it was apparent that a lighted tallow candle was responsible for them. The surface grease was carefully scraped away, leaving a polished, waxy surface. The stain had penetrated right through the paper, while there was also a yellow discoloration due to age. The print, being a fairly small one, permitted the use of a porcelain dish, 20in. by 16in., a most useful vessel for dealing with small prints. Into this dish the print was placed, and about half a pint of high-grade petrol spirit was introduced. The operation, I need scarcely say, was performed in the open air, and, of course, away from all lights, as this is a most important precaution. I have known petrol to ignite when several feet away from a light. Still, there

is not the slightest danger if my directions are followed, provided there is no naked light about.

The operation may be conducted in an ordinary room in which there is no artificial light or a fire in the grate. Smoking is, of course, out of the question during the use of petrol spirit. I have long since discarded the old-fashioned method associated with hot irons and brown paper, although where a grease stain is old and stubborn the application of warmth prior to immersion in the petrol has proved beneficial.

To return to the point. Immediately the petrol flooded the paper several large globules of yellow oil were seen resting on the surface of the print, and, curiously enough, these did not dissolve for some moments; in fact, it was necessary to brush them away. The spots where the grease had originally fallen were lightly brushed, the dish was tilted, the petrol poured off, and in a few moments the print was dry, the only trace of the grease being one or two faint yellow marks that had no oily appearance. Half a pint of water with about

three ounces of the never-failing solution of chlorinated soda was then poured on, and in a few minutes the stains were scarcely perceptible. The print was next rinsed in clean water and placed between blotting-paper to dry, fresh relays being used for the first few minutes. As the drying proceeded so the stains faded until no traces of the original marks were visible, and the engraved surface had suffered no harm.

Proceeding still further to test the efficacy of this process, the same print was deliberately smeared with butter and well rubbed in, and the same process followed out with the exception of the ultimate bath of chlorinated soda, this being rendered unnecessary, as the petrol removed every trace of the grease in less than five minutes. Moreover, when dry it was quite impossible to tell that any such substance had ever come in contact with the print. The print was next anointed with cod-liver oil, and again the petrol worked perfectly. The local chemist was next visited and asked for a little of the worst oil he had. The situation being explained, he suggested cotton-seed oil. Once more the print

was copiously oiled, and in some trepidation I proceeded still further to test the petrol, and once again it came through the ordeal successfully, there being not the slightest trace of the grease, and the print was as perfect as it was when new.

Ink-stains.

Salts of lemon is a chemical that will ofttimes remove a stain that has defied ordinary treatment, and it is particularly useful in dealing with ink-stains, of which there are different varieties. I have found the following process rarely fail completely to remove ink-stains without injuring the print beyond slightly bleaching the portion worked upon. Recently I had carelessly left, face upwards, on a table used for writing, a fine Bartolozzi print in red. On returning I found a large blot of ordinary writing-ink on the most delicate portion of the engraved surface. The print was damped, and with a small camel-hair brush a drop of Liquor Sodæ Chloratæ was applied, care being taken to restrict the area of the chemical to the stain. In a few moments the ink-marks commenced to turn red and become fainter, and at the expiration of fifteen minutes the stain had decreased 75 per cent. There the beneficial effect appeared to cease. I then applied a very little dry salts of lemon, which was evenly distributed over the stain with the aid of the brush. A drop of water was then added. On washing it off after a few minutes, the stain had entirely disappeared, only a slightly bleached portion marking the spot. When the print had been dried, this spot was carefully touched with a little very weak tea and the prevailing tone of the paper matched, the result being perfection.

Some of the old inks will entirely disappear when subjected to an ordinary chlorinated soda bath. In the event, therefore, of there being writing on the print—an artist's signature or a presentation note—which it is desirable to preserve, means must be taken to guard the writing. In the case of a simple and not prolonged immersion in the cleaning-bath, a piece of waterproof paper pasted

over the writing will be sufficient to protect it; but I prefer to use something that leaves no mark on the paper and yet renders the writing permanent. For such a purpose nothing can excel colourless celluloids dissolved in amyl acetate to a consistency of thin gum. This will render writing and paper practically indestructible.

Mending a Hole.

It frequently happens that through injury a portion of the engraved surface of a print is missing, or it may be that it has been so damaged as to preclude the possibility of successfully joining up the break. When this is the case it is better to cut away the damaged portion and to replace it with a fresh piece—graft it in, so to speak. We will suppose that a mezzotint has a hole in it some 2in. across, and the piece is missing. If the injury is in the background or anywhere but on an important portion of the print it is not difficult to find another piece of mezzotint that will supply as nearly as possible the missing portion. It is





ILLUSTRATIVE EXAMPLE OF A TORN PRINT.

Such a hole as that shown may be repaired so as almost to defy detection by placing behind it a portion of a worthless print having a similar groundwork, and cutting through with a sharp knife at the dotted lines both holed print and applied patch. The piece cut from the worthless print will then exactly fit the clean-cut hole in the damaged one.

as well to keep at hand several old prints that are of no value except to cut up, and after selecting something that is as near the character of the missing portion as possible, place it behind the hole, and move it about until the nearest match is obtained. Then cut out a piece an inch or so larger each way than the hole (Plate IV.) and paste it in position and allow it to dry. Now with a sharp-pointed knife cut out the hole, taking care to make a clean cut. A square, a triangular, or other shaped piece may be cut so long as it suits the formation of the hole. For argument's sake, we will assume that we have a hole 3in. square the piece that came out of it. On to this adheres the irregular portion of the original print, and on to the print itself adheres the remainder of the patch. Both these waste portions are then soaked off, which will leave a clean-cut hole and a piece of mezzotint the exact size to fit it. When dry the patch may be placed in position and the effect noted. If suitable it will be inserted. It may be necessary to lay the whole print down before putting in the patch; but whatever is done both print and patch should be of the same degree of moistness, otherwise the fit will not be true, as the presence of moisture causes the paper to expand; therefore both must be similarly treated. A brief study of the illustration will make this operation clear and easy to follow.

Fly-marks.

As a rule, fly-marks will dissolve when the print is placed in an ordinary chlorinated soda bath, especially if they be very lightly touched with a small camel-hair brush. Should stronger treatment be deemed necessary, first try a solution of peroxide of hydrogen, and if this should not quite succeed use the point of a large darning or carpet needle, taking great care not to injure the surface of the paper. Should this happen, the spot may be lightly stippled with a very fine brush, and coloured when dry. The smaller the dots the better, except in the case of line-work.

The texture of the paper is an all-important factor in dealing with fly-marks. If the paper be

of a hard variety, such as Whatman, the marks will remain practically on the surface, and may be chipped off, as it were, with a very fine, sharp knife-point, leaving a small red stain only, which is easily dissolved. With soft porous paper, however, the blemish will be found to have penetrated more deeply, and the use of the bath is advisable, as by attempting to remove the marks by force the surface of the print will be liable to injury. In any case, before wetting the print, try the effect of dry removal by experimenting on some unimportant portion of the print, and proceed to operate according to the result obtained.

Removing Creases.

It sometimes happens that a print has become badly creased, but is otherwise in good condition, and a simple method of repairing the damage is as follows: Thoroughly wet the print, and then remove all surface moisture with blotting-paper. Next arrange it, face downwards, on a sheet of clean glass that is at least 2in. or 3in. larger, and adjust so as to

leave at least Iin. of bare glass on each side. Next cut some straight slips of paper, about Iin. in width, and sufficiently long to extend the whole length and width of the print. Choose paper that is fairly stout, and, of course, white, then thoroughly paste on one side and fasten the print in position on the glass, laying about $\frac{3}{4}$ in. of the paper on the glass and the remaining $\frac{1}{4}$ in. or so clipping the edge of the print. Use one strip for each side.

Stiff flour-paste made as described later will be the best adhesive, and care must be taken to smooth the slips into thorough contact with the print and glass. As the whole dries, the pasted edge will be prevented from contracting, and as the paper shrinks considerably as the moisture evaporates, the crease is stretched out and will entirely disappear. If the paper in the line of the crease has been badly broken it will show signs of weakness, and this may be strengthened by rubbing in a little starch-paste before cutting the print from the glass. This operation should be carried out with the aid of a sharp-pointed knife, the cut

being made along the course of the print's edge, and not attempted until the whole is quite dry.

In the event of a print being creased and the surface unbroken, thoroughly damp the whole and lay face downwards on the glass. Next place a piece of clean, hard paper over the damage and gently hammer with a dessert-spoon, using the rounded portion of the bowl. This will frequently be found to reunite the fibre, and when dried under pressure the crease will have disappeared. Should the crease be of a more serious nature, adopt the foregoing method, but, in addition, strain with strips pasted along the edges.

Inlaying.

Recourse must be had to the process known as inlaying when the margin of an engraving has been cut away and it is desirous of replacing it with another; also in the extra-illustration of books where a number of prints are to be bound up with the letterpress. If these prints were simply mounted on sheets of

paper and then bound, the volume would be extremely clumsy, as the thickness of the paper would be unequal. In order to obviate this the prints are mounted on paper of equal thickness, and all that portion that would be covered by the print is removed with the exception of about $\frac{1}{8}$ in. all round.

Inlaying, however, is a particularly valuable process in the case of a fine print that is without a margin. It is sometimes possible to procure a damaged duplicate of the print to be mended, and this, provided the margin is intact, may be sacrificed for the benefit of the finer but mutilated impression. Here is a recent experience. I possessed a fine coloured impression of the well-known portrait of Mrs. Fitzherbert engraved by Condé, after Cosway, which had been cut to the edge of the engraving. A search round the print-shops yielded a reprint for 10s., and as this had been printed on old paper, it was just the thing. The print to be restored was laid in the exact position on the reprint, and the edges were carefully and lightly marked with a very finely pointed

pencil; then an opening was cut allowing $\frac{1}{8}$ in. either way. To be more explicit, perhaps I ought to say that the opening cut to receive the print to be inlaid was this much smaller, so that when the print was in position the edges just overlapped. These edges were then sandpapered to half their thickness, the work being done at the back of the print, and the same with the margin portion, which meant that when the two edges were placed in position the combined thickness equalled the rest of the paper.

The print was next laid face downwards and a strip of paper so arranged that only the narrow prepared edge was exposed to the paste-brush. All four edges were prepared with paste in this way, and the print was then carefully laid in the position recently occupied by the cut-out portion. Perfect contact was obtained by pressure and the back well rubbed with the handle of an ivory paper-knife. The print was then laid between clean blotting-paper, placed in the press, and well screwed down. The result was most satisfactory, and

the false margin was perceptible only on the closest examination.

Inlaying extra-illustrations for book-work is far simpler, as the mounting-paper is all of one size, and the prints are first trimmed so that the edges are parallel. The print is then placed in the centre and a tiny mark made on the mount at each corner of the print. Next a faint line is ruled or a metal straight-edge is adjusted in position and the opening cut a fraction smaller—from $\frac{1}{16}$ in. to $\frac{1}{8}$ in. is ample. The edges are thinned as before-fine sand-paper will do-and the print is pasted and mounted as already described. Care must be taken not to use an excess of paste, which should be confined to the portion to be fastened. An expert inlayer can do from twenty to thirty prints per hour.

Varnished Prints.

Nowadays collectors often come across old prints which are not only smoke-stained and otherwise dirty, but, what is still worse, thickly coated with varnish, rendering them in that

state of little value and to many quite unsaleable. The fact is it was the almost universal custom when glass was expensive for the framed prints to be coated with varnish in order to protect them. Sporting prints in particular were so treated, and it is even now not at all uncommon to find a nice series of otherwise valuable prints so treated offered at a country sale, or, still more frequently, to see them hanging in the parlour of a country inn. It is not that they have remained there unseen for decades, but for a long time the removal of the varnish from such prints was regarded as a well-nigh insuperable task, and those who probably recognised in them a certain value did not consider the game worth the candle. Be that as it may, varnished prints—and good ones too-are common enough to this day, and the collector in search of nice things at a moderate price should buy them (provided, of course, only spirit varnish has been used). He should think nothing of the varnish, and, as soon as he has the opportunity, attempt the removal of it according to the instructions

given, when he should have no cause to regret his purchase.

As a matter of fact, there are many ways of dealing with varnished prints, but in my opinion only one that meets with unqualified success, and only one class of varnish, viz., spirit, that will lend itself to the operation. To dissolve varnish with the aid of spirit is to risk spoiling the print. Alkalis, such as soda, &c., are another source of danger. The only safe way is first to destroy the varnish with plain boiling water, when it will flake off like so much dust. The hot water renders it quite opaque, and it is easy to see where the varnish still adheres almost an impossibility when a spirit solvent is used. After a few minutes of the very hot water treatment any varnish, except oil, will have perished and may be brushed off, and, as before stated, a close inspection will show that not the slightest trace remains. In the case of a sporting print where hand-colour has been used there will be a loss, and this will require attention, but it is a simple matter to strengthen the hand-coloured parts, and, when dry, a little white of an egg or a touch of pure mastic varnish will give the necessary luminosity to the otherwise dead surface of the reds. It is advisable to treat the print after the varnish has been removed with an ordinary chlorinated-soda bath to remove the dirt, &c., that may have penetrated the paper where the surface of the varnish had been knocked off.

Toning a Bleached Print.

It frequently happens that the stains in a print have necessitated treatment which has left the paper unduly white; it may be in parts only, but in any case the general effect is bad, and as the main object to be achieved is that of removing dirt while leaving the finished print with that natural tone that denotes age and mellowness, a simple and harmless means of achieving this object is to treat the whole print or only the portion necessary with ordinary stout thinned with water to the desired tint. It is advisable first to treat a separate piece of paper of similar texture and leave till

dry, then compare the result with the bleached print. If the general effect appears too dark, add more water. A dry print will absorb far more colour than a wet one, and there is a large range of tint.

Ordinary bichromate stain is another useful means of toning a print, but it should not be used on colour, as chemical action is sometimes set up, which results in an alteration of the tints, particularly if these be blue. It is a safe toning for ordinary plain prints, and should be used as weak as possible, so that a faint yellowish tint is the result.

Worm-holes.

An old print, particularly one that has been framed for many years, is often worm-eaten. Sometimes the print is eaten right through, and at others the "worm" has tunnelled along the paper, just leaving a thin skin supporting the ink with which the print was produced. By far the best way to treat this form of injury is to fill the holes with paper. To do this procure a piece of old

soft white paper (a small piece of the margin of an old print of no value will do) and chew it up into a pulp. The more the fibre is disintegrated the better. Now lay the dry print face downwards on a sheet of stout glass, take a tiny portion of the pulped paper, place it over a hole (or one or two if they be close together), and, holding the print in contact with the glass with one hand, tap the pulp with a dessert-spoon, striking the pulp with the oval underside; or, better still, the implement suggested on p. 4 might be used. This will fill the hole and also form a film of paper on top. Plenty of force should be used. On examining the surface of the print the worm-hole will be found perfectly filled with the material suggested, which will set and remain fast. A touch of pigment to match the surrounding colour and the mend is perfect. In the case of worm-holes in a print that has been laid down, the pulp may be inserted into the hole from the surface. Only sufficient to fill the hole should be used, and the rest of the treatment is as before advised. Occasionally it will be found

advisable to lay a thin piece of clean paper over the pulp and then to hammer into contact, as tiny pieces will sometimes adhere to the spoon.

While on the subject of worm-holes it may be well briefly to refer to the causes of these disfiguring marks in many prints, as it will serve to put the collector on his guard in respect to the keeping of his treasures. The offender. contrary to the generally entertained opinion, is a species of extremely small beetle belonging to the genus Anobium. Ordinarily the members of it are wood-feeders, and are responsible for the destruction of many a fine piece of furniture, or even of a finely-carved pictureframe; but there is at least one species (A. paniceum) which may be regarded as being omnivorous, and it is this creature which is responsible for the mischief-sometimes almost irreparable — to prints, drawings, paintings, and books. As a matter of fact, it will eat and thrive on a most miscellaneous dietary, from cayenne pepper to a mezzotint. It is a vegetable feeder, and it matters not, as may be gathered from the extremes of food quoted, whether that substance be in the natural state or after it has been pulped and otherwise treated, as in the case of paper. The beetle itself is a small, pale-brown creature not $\frac{1}{6}$ in. in length, and the grubs are whitish. They tunnel whatever they elect to feed upon, and if they are allowed to go on unchecked will speedily render a valuable print, picture, or book comparatively worthless.

The greatest care, therefore, should be taken to see that measures are adopted to prevent the damage from spreading directly the depredations of such insects are noticed. It is on record that this species was responsible for the destruction at Cambridge of some very valuable Arabic MSS. A. paniceum, it may be worth recording, is a near relative of A. punctatum, which is of unenviable notoriety, for, besides being destructive to furniture, it is also credited with being a disturber of one's peace of mind by making an extraordinary ticking noise, a sexual call, which has been regarded by the highly imaginative as a death portent. The true Death-Watch Beetle, however, is a much larger insect (1/3 in. to 1/4 in. long) and is known as

Xestobium (tessellatum) rufovillosum. Apart, too, from the actual damage inflicted by Anobium paniceum, the tunnels made also allow the paper or print attacked to become the prey of various fungi, which tend to bring about its ultimate destruction unless preventive measures are taken.

Quite as destructive as the beetle to which attention is directed is a widely different insect —the curious silvery fish-shaped creature with three long bristle-like appendages at the hinder extremity. Popularly it is known as the Silver Fish, Silver Witch, Sugar Fish, Wood Fish, &c., and for two centuries and a half at least it has been regarded as a great pest so far as literary and art treasures are concerned. Hooke's "Micrographia" (1665) it is quaintly described as a "small white silver-shining worm or moth, which I found much conversant among Books and Papers, and is suppos'd to be that which corrodes and eats holes through the leaves and covers; it appears to the naked eye a small glittering Pearl-colour'd Moth which, upon the removing of Books and Papers in the summer, is often observ'd very nimbly to scud, and pack away to some lurking cranney, where it may the better protect itself from any appearing dangers. Its head appears bigg and blunt, and its body tapers from it towards the tail smaller and smaller, being shap'd almost like a carret."

Being a vegetable feeder and fond of starchy substances, it finds in prints and books just the fare suited to its tastes. Unfortunately, it is not often that print-collectors associate with this inoffensive-looking, if curious, insect the damage done to his treasures. The late Professor Westwood in 1879 exhibited before a meeting of naturalists a print the plain border of which had been holed by the Silver Fish, while the printed surface had been left severely alone.

By putting collectors on their guard against these insect foes it is hoped that some good will be done. Ere now prints put away in portfolios and not looked at for years have been found, when actually examined, very seriously injured by both the Anobium and the Silver Fish (Lepisma saccharina). Where, therefore, either

of the creatures is found it should be treated as suspect and ruthlessly destroyed.

I may, however, mention in this connection that a print which has been subjected to contact with chlorine appears to be immune from the attacks of insects generally.

More about Damaged Prints.

Since the earlier portions of this work were written I have had extended opportunities of dealing with damaged and rotten prints, and while engaged in their restoration one or two points were brought home to me that warrant recognition. Primarily I wish to urge the necessity of a support where a torn or a rotten print is in the bath. By "rotten" I mean one in which long exposure to injurious surroundings has robbed the paper of all vitality and natural toughness; this is often the case where a print has been mounted on a porous canvas and framed without further backing. The support is invaluable in lifting out the wet print, now rendered far more fragile by immersion, and whether plate-glass or a sheet of stout zinc be used, the employment of either is calculated to avert disaster, and in any case greatly to facilitate handling. On the whole, I think a sheet of stout zinc is preferable, as where hot water is requisitioned there is no danger of fracture due to heat, and as the material is inexpensive one or two pieces of various dimensions are advisable. In any case, whatever support is used, see that it is a little larger than the print that is being operated upon, and before removing from the bath float the print into position, so that there is a margin of support projecting all round; then hold and slowly raise one corner of the support, and allow the print to settle in contact as the liquor drains away. If this be done slowly the print will adhere, and there will be no inclination to slip.

Another point I wish to emphasise is that should there be a hole, and the jagged edges of the paper wave about when the print is being rocked, place over that portion a plate-glass cutting-shape such as is used in trimming a photographic print. This will serve to keep everything steady; but as it retards the action of

the cleaning agent, it should be removed during the periods when the tray is at rest, in order that the damaged portion shall be equally cleaned. The only objection to the use of an opaque support is that the surface of the print cannot be examined if it happens to be face downwards; therefore it will be as well to remember the position of the print and the nature of the support when selecting such to suit any particular operation. Should an occasion arise where it is necessary to turn a print over during the process of cleaning, the safest plan is to place another support on top of the print while in the bath. Care must be taken that it is nicely sandwiched between the two pieces of glass or metal. Lift the whole out together, guarding against movement, reverse and replace in the bath, then gently raise one corner of the top support, and the liquid forming the bath will assist in detaching the print, and the top cover or support may be entirely removed. When the process of cleaning has been completed the print should be lifted from the bath with the aid of the support and stood up to drain. In

half an hour the print, if placed between blottingpaper, will readily leave the support, but while still wet it will have a decided tendency to cling, as the air between the print and support will have been excluded, and atmospheric pressure will hold it until almost quite dry. If the print is to be laid down—that is, mounted in contact with paper or other medium-it will be as well to apply the paste when the paper is half-dry, as this minimises the risk of tearing when using the paste-brush on a very delicate surface. It must also be remembered that it is the print that must receive the paste, and not the strained support on which it is to rest; this must always be dry, and in any case taut, before being brought in contact.

"Foxing."

As previously intimated, this condition is one often existing in prints, and, for that matter, in books. "Fox "-marks appear to be of more than one variety, for, whereas some of the reddish spots to which the term "foxed" is usually applied appear to be practically on the surface,

others are of considerable depth. In the case of the former, damp seems to be, at any rate, the predisposing cause, and this is followed by a kind of fungus. So far as the latter is concerned, this is probably due to some ingredient in the paper that, after a lapse of time, is acted upon by the atmospheric or other changes to which it is subject. The most likely cause is that the paper from which the print was made absorbed in some way particles of iron, perhaps from the vessel in which the pulp was originally mixed. From whatever cause or causes, the marks are disfiguring, and, not unnaturally, detract alike from the value and the appearance of a print. It was not very long since that a badly "foxed" print was regarded as practically beyond renovation. This, however, no longer obtains, and if "fox"-marks are dealt with on the lines briefly suggested elsewhere, they may readily be eradicated without the print suffering in the least.

CHAPTER IV.

LAID-DOWN PRINTS. INDIA-PAPER PRINTS. TORN MOUNTED PRINTS.

It is seldom that a print is handed down to posterity in its original condition, and the collector will come across fine specimens of the engraver's art that have been subjected to the process known as mounting. For this form of vandalism we have to thank the frame-maker, who, realising that a smooth surface agrees with his own ideas of what should be, suggests to any ordinary customer the desirability of mounting the print which may have been left for framing by the owner, who perhaps, all unconscious of the value, has come into possession of a fine print that he desires to see on his walls. It may be a folio state proof Morland, which,

simply laid in a frame, would present a "cockled" appearance, and this, from a frame-maker's point of view, is an abomination. Therefore the glue-pot is promptly requisitioned, and when the print has been laid down with paste on a stout piece of strawboard the sunk mount is glued in position and framed, the probable result being an expenditure of a few shillings and depreciation in value to the extent of as many pounds.

I will now proceed to show how the injury thus inflicted may be repaired. First examine the back or gently prise up the bevelled edge of the front mount, and if there are signs of glue be thankful, for this is easily dealt with. Take care that no surface is forced apart, or the print will be split, one portion adhering to the top mount and the other to the bottom support. Glue and moisture are deadly enemies provided the temperature is low, and a print that has been glued down on a mount may be easily removed if only it be soaked in *cold* water for a few hours. The glue will expand into a thick jelly, and will isolate the two paper

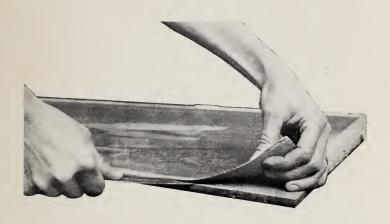
surfaces that it has originally served to hold in contact.

The cut mount having been dealt with, it may be necessary to remove the print from the cardboard on which it rests, as in all probability the mountant in this case is paste, and after the cold water has done its part hot water should be poured on; this will generally loosen the mountant and allow the print to be lifted off carefully. By far the best way is to turn the mounted print face downwards in the bath and, commencing at one corner, gently lift the mount. It may be necessary for the corner of the print to be started, and then the whole should separate as the mount is raised, leaving the print face downwards in the now only warm bath. Now take an ordinary paste-brush, and use it on the back of the print so as to remove the paste adhering, otherwise when dried the print will not present an even appearance. If the appearance suggests complete removal, make sure by touching the surface—a slimy, slippery feeling means that all the paste has not been removed. Complete the operation, and the print is ready

for cleaning, assuming it to be in need thereof.

Prints Laid Down on Canvas.

A very common form of mounting prints in the early days was to lay them down on canvas stretched on a wooden frame, and when the canvas was of a coarse and porous nature the combined effect of age and damp frequently rendered the print extremely delicate, if not rotten, particularly if the back was left unprotected. In the case of a print that has been treated in this manner it is advisable to proceed with extreme caution. First lay the stretcherframe on a table or other support, print upwards, and with a thin, sharp knife separate the canvas from the wood on which it has been nailed or glued (Plate V.). This is best done by making an incision on the edge of the stretcher-frame, and, pressing the blade of the knife flat on the upper surface of the stretcher-frame, cutting right round. You will then have the print with the canvas backing only. It is advisable to remove this



PRINT LAID DOWN ON CANVAS.

Method of removing from strainer a print laid down on canvas by means of an incision with a thin-bladed knife on the edge of the stretcher-frame.



canvas from the print by tearing it off, which may be safely accomplished in most cases, although some of the paper may adhere to the canvas. The paper is much less liable to tear when dry; and, furthermore, another reason why the print should not be soaked off is that on placing the mounted print in water the paper immediately expands to a far greater extent than does the canvas, and the two are at variance, resulting in a very cockled, uneven surface which renders the handling of the print extremely dangerous, as the bumpy surface has a tendency to break. Still, when it is found that a print will not lend itself readily to the following operation, soaking is necessary; in fact, boiling water may be required in order to effect a separation. In this case see that the print is face downwards in the tray, and, after pouring on the hot water, rock the tray for a few minutes, take the canvas at one corner, and gently separate. As the material leaves the print turn it back on itself and exert the pressure as close to the untouched portion of the canvas as possible. This will minimise the risk of a tear, or even of peeling.

As soon as a start has been effected, it will be necessary to hold the released portion of the print down on the bottom of the tray with one hand, using the other to drag the canvas horizontally across itself, keeping the two surfaces—i.e., the separated and the still adhering one—in as close contact as possible (Plate VI.). A little attention devoted to the illustration will, or should, result in a successful operation, but do not persist if the paper shows a disposition to split unduly. Pour off the cold water, and apply a further supply of hot, plenty of which should be available.

As I have already remarked, it is better to remove the canvas when dry, provided it will allow of it. The operation entails more care, may necessitate assistance, and will certainly be more lengthy, but this plan should be followed if at all possible, using exactly the same operation with the exception of a bath and water. Place the print face downwards on a flat, clean surface, and when one corner has been carefully detached, hold the released portion flat and gently tear away the canvas, bending it back-

wards and down over itself, as previously described. When the whole of one end has been separated it is advisable that some assistance in the shape of an extra pair of hands be requisitioned in order to hold the print safely down and prevent buckling when tearing back the canvas. In the case of a closely woven canvas it is rarely possible to separate in a dry form without leaving a thin skin of paper attached to the canvas, but this is of little consequence when the print is on paper of average thickness.

Sometimes a print will be mounted on a stretcher-frame without either canvas or paper intervening; this is of small account so long as the top surface of the stretcher has not been fastened to the print. As a rule, the edges are bent back and stuck to the reverse side of the stretcher, and a clean cut with a sharp knife along the edge of it will effect a release (Plate VII.). Should the face of the stretcher and the back of the print be in contact, a delicate position arises, as it is very dangerous to attempt to introduce a knife between the two, and if the stretcher and

print be placed in water to soak there is a serious danger of the wood swelling and splitting the paper. In these circumstances it is advisable repeatedly to moisten the portion of the print that is affixed and cover it with strips of blotting-paper, that will serve to hold the moisture. After a few hours of this treatment there should be some signs of willing separation, and an application of hot water from a kettle poured over the obstinate parts will generally result in success.

When examining a print prior to any cleaning operation it is well to diagnose the case, and if dust and surface dirt are visible it is very essential that as much as possible be removed prior to wetting, as this is difficult afterwards. Flick the surface with a silk handkerchief or clean cloth, and then very lightly rub with some clean breadcrumb at least one day old. This will remove the dry dirt, but remember it will also disturb the surface of the print unless great care is exercised, and a rubbed print means considerable loss of value. Cut an ordinary thick slice of bread, break into small portions,

and rub the print with them, using a fresh piece occasionally as the crumbs become discoloured, and press lightly with the palm of the hand, using a circular motion, taking care that the print is on a perfectly flat support, and watch for the least signs of rubbing, which will be apparent if a series of white hair-like marks appears. In the case of India paper never use friction, as the surface is too delicate, and see that there is no hard crust attached to the crumb.

India-paper Prints.

It is presumed that most people know what India paper really is. It is a thin tissue paper that was introduced into the printing world about 1820, and when a plate was being printed from, a sheet of ordinary paper was placed in the press and the tissue, a trifle larger than the plate line, was laid on the surface. When the impression was struck the pressure used was sufficient to anneal the two papers, and the tissue, being of a delicate surface, registered all the more minute points in the engraving, which, had

coarse paper been in use, would have been lost in the interstices.

While on the subject of India-paper prints, it may be as well to offer a few remarks as to the treatment advisable when cleaning them. We will suppose a proof on India paper after J. M. W. Turner has developed a series of large spots. It is simple enough to remove the blemish in an ordinary bath of Liquor Sodæ Chloratæ. By an ordinary bath we mean that the proportion of chemical to the water should be about 1 in 10. For a small print a quart of water and half a teacupful of chemical will be about right. But an India-paper print must not be placed in a bath, as the two papers—i.e., the thick support and the thin India-are differently affected by the moisture: the thick paper will expand to a far greater extent than the India is capable of, and the result is separation. This is to be deplored, because it is an extremely difficult matter successfully to remount an India-paper print. I have found the following by far the best method of dealing with the subject. Take a sheet of blotting-paper sufficiently large so that when folded the print about to be cleaned is entirely encased. Now prepare a very strong solution of Liquor Sodæ Chloratæ. Add a teacupful of water to the same amount of chemical, lay the blotting-paper in the tray, pour on the mixture, thoroughly saturate the paper, and pour off any surplus cleaning fluid that is not absorbed. Allow the paper to drain by tilting the tray to as acute an angle as is consistent with safety. Now place the print while dry between the wet paper, and the whole between two pieces of glass-plate for choice—as the extra weight acts as a press, and the non-porous nature of the glass prevents the escape of the chlorine. The print should be allowed to remain in the paper for about fifteen minutes. After that time see if the print is receiving level treatment. By moving it an inch or so and closing up once more, the whole of the surface will become equally moist. At the expiration of an hour the "foxing "-i.e., red spots-should have almost disappeared, and the print may now be placed between clean, dry paper and subjected to even pressure. This process will effectually clean an India-paper print without the tissue becoming detached. Remember that it is not necessary to leave a print in a cleaning-bath until all traces of the stains have disappeared, as the last 25 per cent. will fade out on the print being dried, and by discontinuing the operation at about this point over-bleaching of the paper is avoided. Should the India paper have become by any chance detached, the following method may be employed. India paper when wet can only be handled with the aid of a support, and a piece of glass somewhat larger than that upon which the print is to be remounted is best. Float the wet India into position on the glass, and, while gently holding steady, slowly raise the glass one side until clear of the water. As the support is raised the print will settle on the glass, which it should be allowed to do quite evenly and without creasing. Should any adjustment be necessary sink the glass again, and when the print has refloated it may be rearranged and the glass once more slowly lifted. The paper will adhere, and should be allowed to drain, and then be dried, or nearly so, by means of blotting-paper. Sometimes an India print will not become detached altogether, and when this happens it is advisable to leave it in soak until the whole floats off, as it is an extremely delicate matter to operate on a semi-detached print.

The mount-paper from which it has become detached will be found to have the mark of the plate impressed when printing, and the India has to be readjusted in position. As a rule, the paper is a trifle smaller than the plate line, and no difficulty should be experienced if these instructions are followed. Lay the India face downwards on the glass, and carefully apply a coat of thin starch-paste, taking care that none gets on the glass. The moisture will penetrate the paper, and the pressure of the brush will remove the air between the paper and the glass, causing the print to adhere. It may now be handled without fear of falling off, and, having placed the original mount, which should be dry, in position on another piece of glass or flat surface, pick up the glass

on which rests the India print and turn it to the reverse side—i.e., the print should be underneath. Now move into position just above the mount, and by looking through the glass it is a simple matter to determine where it should rest; then lower the glass so that the pasted surface comes into contact with the mount all at once, and not one portion at a time. Remember that when once the India has been permitted to come in contact it must be allowed to remain, as the paper is extremely delicate and will permit of no handling. Apply gentle pressure to ensure perfect contact, then, holding both pieces of glass firmly together, turn them bodily over, guarding against any shifting. The uppermost glass may now be lifted, leaving the print face downwards on the underneath piece. On this place a piece of blotting-paper and replace the top glass. In a few minutes the print may be removed. This is best done by reversing the whole thing and carefully lifting the top glass off the print, not the print off the glass. Should any portion of the edge not be in contact, take the blade of a penknife and





PRINT LAID DOWN ON CANVAS.

Method of holding the print down with one hand while utilising the other to detach the canvas.

carefully insert a very little paste where required. The print may now be placed between clean blotting-paper and dried under pressure. If the process of cleaning an India-paper print between blotting-paper wetted with solution be followed there will be no occasion to resort to the delicate and intricate operation just described, as the two papers will not separate if ordinary care is exercised and the print is not made too wet.

Another method of dealing with India-paper prints which I have proved successful is by the aid of chlorine gas, a powerful deodorizing agent. The chief advantage this possesses over the one already given is that wetting of the print, with its attendant risk of separation from the paper support, is avoided. As, however, the fumes given off are extremely pungent, suffocating, not to say poisonous, the process is one entailing some risk. Necessarily, too, the operation must be conducted in the open air. My method of employing it was as follows: A box with a glass lid having been constructed, a wire tray was fixed near the centre to support

the print. Apparatus for the manufacture of chlorine gas was then set up and attached to the inlet to the box. The gas is evolved by heating triturated manganese peroxide (a mineral earth) with hydrochloric acid, the gas being then passed through water and into the box. The print chosen was one very much "foxed," and the experiment was entirely successful, although the paper was somewhat bleached. As the installation is inexpensive, it would be as well for anyone contemplating print restoration on a big scale to experiment with it. All that is needed are a few feet of glass tubing (which may be bent to the required angles on being held over a flame), a glass flask, some manganese peroxide, and hydrochloric acid. Any chemist will be able to indicate the mode of procedure, and advise as to the use of the spirit-lamp for heating the acid and mineral earth. The glass flask should be furnished with a well-fitting cork, and through a hole in the latter should be inserted the glass delivery-tube conveying the gas to the water in the wash-bottle.

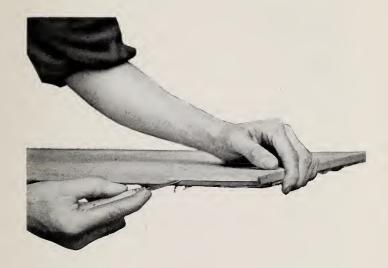
How to Deal with a Damaged Mounted Print.

We will now proceed to deal with a print that has been mounted on a wooden stretcherframe without any paper or canvas interposing, and, furthermore, that has a serious damage in the shape of a hole—the paper, in fact, torn in all directions and extending nearly to the edges of the stretcher. Once in the bath and wet it would be impossible to handle such a print with safety; the glass support is therefore again requisitioned. Place this in the tray, and then lay the print, face downwards, on the glass. Carefully pour in water until the stretcher floats, then place some heavy weights at each side to keep the print submerged. It should remain several hours in this position. water should then be carefully poured away, allowing the torn print to sink on to the glass support. Should the paper still adhere to the wooden frame, gently pour in hot water—the hotter the better—and plenty of it. This should release the print. Carefully raise one corner of

the frame, which in all probability will have become unglued by this time, and see if the print falls away as the wood is raised; if so, continue, immediately desisting if the paper shows signs of tearing. A little patience and assistance where needed should effect the desired separation, leaving the torn unmounted print on the glass support, which can then be handled with perfect safety.

An ordinary cleaning-bath may now be substituted, and while the print is cleaning carefully remove any paste that may still adhere where the print was affixed. If examination of the print is necessary in order to ascertain how the cleaning is progressing, slowly raise one side of the tray and allow the print to settle on the glass (Plate VIII.), which may be entirely removed, and the surface of the print examined by looking through the support.

The print, being badly torn, will need mounting, and this may be either on a stout paper support or on thick mounting-board. The latter is easier, but the former is by far the better, as the print has merely been



LAID-DOWN PRINT.

Method of removing a print mounted on a stretcher without either canvas or paper intervening.



backed, which is preferable to clumsy mill-board. However, both processes will now be described.

Mountants.

Have ready some freshly-made starch-paste, which should be used while still warm, as it becomes jellified on cooling. A table-spoonful of white starch should be placed in a jam-jar or a basin, and water added until the starch can be worked up to the consistency of thin cream; then pour on about half a pint of boiling water, stirring meanwhile. The result will be a pure and useful adhesive.

Another mountant that will keep indefinitely, and is very useful for all purposes, may be made as follows: Take half a teacupful of flour and mix with cold water until a smooth, creamy mass is produced. Place in an enamelled saucepan and let it just come to the boil, stirring constantly, and adding a little alum or oil of cloves as a preservative. This is a really invaluable mountant.

Mounting a Print on Millboard.

To revert once more to the damaged print. By gently manipulating the torn portions as the glass is lifted from the bath it will be possible to adjust the edges so that they assume as nearly as possible their original position, but do not attempt to adjust them after the water has drained from the paper. The print is, of course, still face downwards on the glass. Absorb as much moisture as possible with two or three applications of blotting-paper, pressing the print into thorough contact with the glass. Now apply a thin coat of adhesive, taking care not to disturb the torn edges of the print.

Assuming that the simpler mount of mill-board has been selected and cut a few inches larger than the print, bring the mount into position and lower on to the pasted print. A little judgment will be necessary to gauge the position, but more margin to one side than to the other is immaterial, as when dry trimming will rectify this. Next quickly and firmly go over the back of the mount with the palm of the hand or a dry cloth to ensure the complete union of the

two surfaces. Now cover with the second piece of dry glass and leave under pressure for a while. After a few minutes pick up the two pieces of glass, holding them firmly so that the print between does not move, and turn the lot upside down. The top glass may now be carefully raised at one corner, and, if the print readily leaves the glass and adheres to the mount, continue to raise until it is clear and reposes on the mount. There may have been some tendency for a torn portion to stick to the glass, so when it has settled into position apply dry blotting-paper and once more press over the whole surface. The print should now be placed under pressure to counteract the tendency of it or even of the mount to curl on drying. There is bound to be some slight indication of this, but it is easily remedied by gently bending the print the reverse way of the curvature.

Mounting a Print on Paper.

Cut the paper, which should be of equal thickness with the print and about 2in. or 3in. larger, and lay on a clean, flat surface. The

paper should then be wetted with a sponge and clean water, going over both sides; next around the edges dry off all surface moisture with blotting-paper, and apply a good coat of flour-paste to within about rin. of the margin. The wetted paper will now have increased in size by reason of the moisture, and it is this fact that permits of the whole operation. Take a sheet of glass, not smaller than the paper, and lay it in position on the prepared paper, or lift the paper and lay it on the glass, pasted side downwards of course. Wipe smoothly and put out into the air to dry. If the pasted paper has been properly prepared and pressed into contact it will hold, and as the moisture evaporates there will be a tendency for it to resume its original size. This it cannot do; so the result is that the paper stretches drumtight, rendering it incapable of movement.

The print to be mounted is treated in exactly the same way as in mounting on strawboard, excepting as regards its position. This must be such as to allow a space all round the margin that has not been attached to the glass, so





HANDLING WET INDIA PAPER OR OTHER PRINTS.

Method of raising print from bath on glass support, thus obviating the risk of damage that might otherwise result if taken up with the fingers alone.

that when a knife is used all round the print it will become detached, leaving the fastened edge on the glass. Should the print be in need of touching up, it will be advisable to allow it to remain stretched on the glass until this has been done. If the print was torn and the edges have not returned to their exact position there will be the white marks of the paper visible here and there. This may be successfully treated with the aid of a fine camel-hair brush and water-colour. If the print be a mezzotint there will be considerable gradation, and in working in the Indian ink use a series of tiny stipple touches, and be sure not to have the colour darker than the uninjured mezzotint. It is quite easy to add strength, but very difficult to remove the colour afterwards.

CHAPTER V.

SPURIOUS PRINTS.

The "Faker" at Work.

Forty years since spurious prints were practically unknown. True, there were a few reprints and copies of the old masters, such as Dürer and Rembrandt, but "fakes" were seldom met with. In those days nearly every oldestablished London print-seller had piles of duplicate Bartolozzis, hundreds of one subject, out of which, occasionally, one or two were sold for a few shillings apiece. To-day those self-same print-sellers in some cases do not possess a single impression to remind them of their lost hoard. One thousand impressions from a plate that was perhaps afterwards destroyed do not go far among ten thousand collectors, so the demand is an inducement to the "faker" to

endeavour to supply something as near as possible to the original.

Reprints from Original Plates.

The "faker," to take a case in point, may have become possessed of the original plate of some subject that is in demand—say, for example, a full-length portrait of a lady engraved in mezzotint. The plate in all probability is more or less worn, so the first thing done is to obtain a good impression, and this would cost a good deal; but the "faker" has no fear, knowing the investment is a good one. An impression is then struck from the plate to ascertain the condition, and an engraver engaged to rework the plate and render it capable of throwing as good an impression as possible. Next comes the old paper of the correct period and texture. There are plenty of old blank folios in existence, and when the right article turns up in a sale-room it is instructive to note the apparently high price it realises. A few weeks afterwards a charming specimen of the English School of Mezzotint turns up in some sale-room: it has

been artistically laid down on an old canvasmounted stretcher, judiciously aged, and in a contemporary pear-wood frame. The competition is spirited, and, assisted by a good reserve, fixed at something less than an old impression would be worth, the enterprising manufacturer nets £20 or £30 for something that has cost him, all told, £2. This goes on until the regular buyers become aware of a new "fake"; but still there remains the great army of private buyers, who are naturally not so well posted on the subject of reprints, and many hundreds of pounds are expended in practically worthless prints, which find a place among the collector's most cherished possessions. Disillusionment rarely comes to him unless he attempts to realise. Usually it is the executors and beneficiaries who have an unpleasant surprise.

A dangerous "fake" calculated to deceive many is the print called "The Fern-Gatherers," associated with the name of William Ward. The Bazaar, however, has outlined the history of this production which should always be left severely alone.

It seems that prints of a sporting nature have met with most success, doubtless on account of the comparatively recent engraving—1830-40 and the fact that sporting subjects appeal to a large class who are not otherwise interested in old prints. It was customary with many of the Alken prints to have the sky and some of the landscape printed in colour, the horses, dogs, riders, &c., being left plain for colouring with the brush, and a well-coloured, unworn impression on old Whatman paper will look almost as well as an original. One of the chief tests is the absence of aquatinting, particularly in the sky, and the employment of water-colour to fill the gap. If there are signs of this having overflowed the edge of the engraved surface, there is a strong suspicion of its being a reprint. There is no doubt that the most valuable test for prints engraved in stipple or line, or a combination of both, is that of the sense of touch. A process plate invariably feels smooth, whereas an engraving can be not only felt, but the raised ink, particularly in the heavier portions, can be seen to stand up above the

surface of the paper. The carbon process is about the only exception to this rule, and that is lacking in sharpness compared with the original from which it was taken.

Reproductions.

We will now turn to reproductions pure and simple. Some years since an important London paper conceived the idea of reproducing in colour a pair of prints after Morland. This was the first essay in this direction, and the work was exceedingly well done. The result was a tremendous sale of that particular number, and a small army of the outside dabblers in prints, &c., did a roaring trade all over the country, pawnbrokers, dealers, publicans, and collectors falling ready victims, and to this day there are speculators who burn their fingers with these very prints, which cost originally sixpence (Plate IX.).

Now that reproductions are to be found on every hand, the collector with knowledge is able to carry in his mind's eye the appearance of the right article, and as a rule is able to detect the



"THE ANGLERS' REPAST."

A reproduction of one of the most important prints after George Morland, and the one that has probably deceived the largest number of amateur print collectors.



spurious. It rests with the photogravure to claim the premier position in the matter of misleading even an authority on prints.

To cite an example, I might mention a wonderfully good reproduction in photogravure of the portrait of Mrs. Robinson engraved by J. R. Smith. This has been sold repeatedly in London sale-rooms, and has, moreover, been purchased as the right article, and at nearly the right price, by dealers and print-sellers to whom one would go for an opinion. In justice to the buyers, I must mention the fact that photogravure is capable of reproducing a mezzotint to perfection, and a careful selection of an old frame of the right character, coupled with laying the print down on an equally old stretcher, the whole being artistically stained, has often produced a "fake" that, to the writer's knowledge, hangs in more than one important collection, so that an appearance of undoubted age and quality is not sufficient to assure genuineness.

Some years since, a very fine reproduction in colours of Miss Farren made its appearance,

and the first two or three copies realised very high prices at auction. I saw one of the biggest firms give £50 for a zincotype reproduction of this subject. In order to differentiate between the genuine and the spurious article, I would say first that the genuine print has a "burr" to it; the ink can be plainly felt, whereas the reproduction feels smooth, almost greasy, to the touch. Secondly, the imitation is slightly smaller, owing to the difficulty of reproducing by the aid of photography a print the exact size of the original.

Prints Posing as Paintings.

Whilst on the subject of "fakes," it will be as well to refer to a branch of the business which, although the ultimate result was not a print, the origin was such. I have occasionally met with (and on one occasion purchased) what apparently was a well-executed oil-painting. When I say apparently, I mean it was well executed, and apparently an oil-painting, but a curiously even surface, devoid of cracking, in spite of age, led to a closer examination, and in

one or two places the work was found to be that not of the brush, but of the graver. In short, it was a print beautifully painted over, for the most part very thinly so, but here and there was a good bold dab of pigment. The back showed contemporary canvas, but on the edges being closely scrutinised paper was found. A powerful glass disclosed undoubted engraving, and I marvelled at the misspent talent of some unknown, yet capable, artist who preferred to decorate a print instead of producing an original work. This is a very common fraud among the Continental "factories," particularly those of Belgium. These specimens are chiefly small, and apparently painted on panel, but in most cases a photograph intervenes.

False Proofs.

In the old days, when prints were not thought so much of, and were being printed and sold for 2s. 6d. each, it sometimes happened that a blank strip of paper was laid over the bottom of the plate, whereon the title and artists' names appeared, so that, when the impression was struck off, the strip of paper prevented any impression from being registered, and the result was, to all intents and purposes, a proof, except, perhaps, as regards impression. Such prints nowadays pass as proofs, but a careful examination will reveal the almost entire absence of the indentation caused by the plateline, and in its stead is the mark across the bottom of the engraving where the edge of the paper has been forced into the print. This is known as an impression with the title, &c., "blocked out," but for obvious reasons the print is oftener described as a proof.

Another, and more frequently adopted, process of making a false proof is to erase the title. In the case of a delicately engraved inscription, such as "'Master Lambton,' by Samuel Cousins after Lawrence," where the characters are almost hair-like, the process is simple, and if neatly carried out will generally escape detection, particularly when the print is under glass. If the letters be rubbed with a piece of fairly smooth paper held quite flat, and just one finger employed, using a circular movement, in a very few

moments the letters will disappear, and there will be little or no roughness of the surface or apparent thinning of the paper. It is as well to remember that a print held up to the light will generally show signs of interference.

Strengthened Prints.

And now for a form of "faking" that is practised by people who, curiously enough, imagine they are doing a perfectly legitimate thing-in fact, almost a meritorious performance. I refer to a growing evil in connection with mezzotints, it being a common practice for some dealers to employ artists (?) to restore a print by strengthening the engraving with ink, thereby transforming a very poor impression into a good one, or a good one into a fine one, it being next to impossible to turn a really bad impression into a fine one. Some operators even go to the expense of an instrument called the airbrush, by means of which ink, &c., is sprayed on to the print, the effect resembling mezzotint, and a print so treated is exceedingly difficult to detect, especially when worked on by a practised hand. A very close examination, coupled with a lively sense of what a mezzotint really is, will leave the interested person in doubt, if not actual uncertainty, as there is a curious heavy effect, and the ink used is generally too black. Moreover, the lighter portions of the engraving are too thin by comparison with the heavier The "faker" is not content with shadows slightly strengthening those parts that lend themselves thereto, but seeks to do too much, and this generally "gives the game away." ordinary print can be considerably improved with a few delicate touches, and this is the usual course adopted, especially as an air-brush costs many pounds.

The difference between a hand-coloured print and one wholly or partly printed in colour is doubtless known to most collectors, and the tyro need only examine the engraving, using a glass if necessary, to see if the individual coloured dots or lines are surrounded by the uncoloured paper; for instance, a blue dot, if printed in colour, would be surrounded by a white sea, and a line would be minus colour

except on the line itself; whereas a red, brown, or a black print that has been hand-coloured presents an unbroken wash of colour and the interstices between the dots are no longer white or yellowish, according to the paper, but have been covered with the brush along with the engraved portion. The presence of a small amount of hand-colour on an otherwise printed-in colour specimen is a quite common occurrence, and does not militate to any great extent against the value, as the effect is usually to improve the whole.

Some Clever Imitations.

From the writer's "Rogues' Gallery" of reprints, reproductions, copies, &c., of the genuine article, a few have been selected for reproduction, and it is to be hoped that some reader may be spared the unpleasant ordeal of disillusionment. There are, of course, hundreds of spurious prints, and to enumerate them all would constitute an impossible task. What, therefore, I propose to do is to mention just a few of the most successful. To commence,

we will study a well-known print which, on account of the popularity the original picture enjoyed, has been engraved by more than one artist, thereby causing confusion in the mind of a collector who is simply conversant with the subject. The picture referred to is that of the Calmady children, by Sir Thomas Lawrence, and entitled "Nature." This picture is undoubtedly Sir Thomas Lawrence's masterpiece as a "child subject," the painter himself looking upon this as one of his best works, and probably no picture of "childhood" has ever attained the popularity that this one has. "The Lovely Children," "Nature," "The Daughters of Mr. Chas. B. Calmady," and "The Calmady Children" are various titles of the one subject. Plate X.) It was through an introduction brought about by the celebrated engraver F. C. Lewis that Lawrence committed these lovely portraits to canvas, and when Lewis exhibited to the painter a proof from the plate he had engraved he purchased the plate, adding a further twenty guineas to the price-sixty guineas-asked by Lewis, as a tribute to the



"NATURE."

A reproduction of Sir Thomas Lawrence's masterpiece—portraits of the children of Mr. Charles B. Calmady. This engraving has been rendered by many hands: F. C. Lewis, F. C. Doo, and Samuel Cousins.



engraver's art and the painter's appreciation. "Nature" was engraved first by F. C. Lewis in 1825; then F. C. Doo rendered the subject in 1832. Samuel Cousins executed his plate in 1835, and Lewis re-engraved it in 1837. Of these, the mezzotint by Cousins is the most valuable, although a lover of line-engraving should be well satisfied to possess an example of Doo's plate at a tithe of the cost. Our illustration (Plate X.) is taken from a clever reproduction that appeared in a London weekly some years since, so that anyone not familiar with the right print is urged to be careful.

Another celebrated print after the original by Sir Thomas Lawrence is "Lady Acland" (Plate XI.), also engraved by Samuel Cousins. This plate, after lying idle for some years, was brought out and reprinted from. The impressions were excellent, and I have seen modern reprints sold (and purchased by collectors who ought to know) for £40 and £50, the price when sold by the firm who possessed the plate being £2 2s. or £3 3s. only. This speaks volumes for the excellence of the reprint, and it

is only by a close examination of the paper and absolute familiarity with the appearance of the original print that the late impressions can be detected. Hence the need for one more word of warning. It is difficult to imagine a more charming family group than that of Lady Acland and children, and it is to be regretted that Doo or Lewis did not engrave the subject. "Lady Acland," it may be incidentally remarked, formed the frontispiece to vol. lxiii. of the *Graphic*, and thousands have been mounted and sold to unsuspicious "collectors" as the right article. It is, of course, smaller than the genuine print, and easily detected by anyone familiar with the original.

Turning to the works of George Morland and modern reproductions of the engravings of his pictures, perhaps the most successful from a "wrong" point of view is the pair entitled "A Party Angling" and "The Angler's Repast" (Plate IX.) which were reproduced from, and also given away with, a celebrated illustrated London weekly.

As reproductions of coloured prints, the series

known as "The Morning" (Plate XII.), "Noon," "Evening," and "Night" is perhaps among the most successful, and, being finely printed in colour, they lend themselves to the process of "faking." Laid down on an old strainer, and carefully stained and varnished, they are calculated to deceive most people, but the greasy surface of the paper when "unfaked" will at once differentiate them.

Another pair of prints—"A St. Giles' Beauty" and "A St. James' Beauty" (Plate XIII.)—engraved by Bartolozzi after Benwell, constitutes another source of danger to the collector, as they have been reprinted from the original plates, as well as been reproduced by mechanical means. And when the reprints are met with on old paper they are not at once apparent.

It was customary a century ago for engravers of the French School to copy many of the English productions as soon as they appeared, and some of these copies are almost exact counterparts of the originals, and, being contemporary, constitute a serious stumbling-block. When in colour, the appearance is a

little too brilliant, and there is a slight hardness about the general appearance which is more evident on comparison.

Continuing my enumeration of noteworthy reprints, I would illustrate a few well-known ones in "Mrs. Fitzherbert," by Condé after Cosway (Plate XIV.); "Nell Gwynn" (oval), by Ogbourne after Lely, usually in colours (Plate XV.); and "Mrs. Siddons," by Tomkins after Downman (coloured reproduction) (Plate XVI.). The whole of this series of Downman's has been reproduced, and it certainly will puzzle the amateur, especially if they have been "treated." Plate XVII. illustrates a beautiful Wilkin subject after Hoppner, and one that constitutes a thorn in the side of the young collector, so excellently is it faked at times and so manifold are the ways in which the faker adds to his deception by the capital environment he provides for the print.

Difference between Fakes, Reprints, and Reproductions.

Before concluding an interesting but somewhat unsavoury subject, it will be as well to enter



"LADY ACLAND."

By Samuel Cousins after the original by Sir Thomas Lawrence. A celebrated print, late impressions of which are often sold as early ones; while a reproduction smaller in size than the original (12in. by $9\frac{1}{4}$ in., measurement taken within the border) is much in evidence.



into some little explanation as to the difference between fakes, reprints, and reproductions. A "fake" is a reprint or reproduction that has been subjected to a process of strengthening, staining, mounting, varnishing (occasionally), with the idea of making it look like the genuine original. A reprint on old paper—that is, paper of an earlier period than the date when the impression was struck—must be described as a fake; but a reprint on contemporary paper, and not worked up in any way, must pass as a late impression, but otherwise genuine so far as the absence of deliberate intention to defraud is concerned.

Reproductions of Original Drawings, &c.

At the risk of introducing what may appear to be foreign to the subject under consideration, I cannot refrain from referring to a form of imitation frequently met with in that of reproductions of original drawings by John Downman, beautifully executed and delicately coloured to resemble the original. Beware of anything purporting to be a portrait in crayon

or water-colour by Downman; the odds are tremendously in favour of its being spurious. One of these, artistically "got up" and placed in an old frame, will defy a casual examination. I have noticed with considerable alarm that a clever photographer well versed in the carbon process can produce an article that proves a real difficulty to the unwary collector, particularly in what purports to be a drawing in sepia, for instance, by J. M. W. Turner, and copied from a "Liber" plate. Whistler is another artist who is receiving a lot of attention at the faker's hands. A piece of bluish-grey paper and vague sketches bearing the "Butterfly" signature are appearing daily.

Again, it is not at all unusual to come across forgeries of well-known water-colourists, such as David Cox or Birket Foster. It seems that some obscure artist will study a Cox drawing, and then on toned paper produce something that is a slap-dash imitation of the master, bearing the signature, and possessing an appearance of age. There are quite a lot of these knocking about, and mostly the work of

one man, who no doubt makes a good living. It remains for the proper authorities to prosecute in a case of this sort, which is practically on a par with counterfeit coining. Forgery is forgery, and equally culpable, whether perpetrated on a cheque or a picture, and some active move to combat this evil would be welcomed.

CHAPTER VI.

ANOMALIES IN PRINT VALUES—PRINTS TO COLLECT—OVAL MOUNTS.

Anomalies in Print Values.

What constitutes a valuable print? There are several answers to this, and it will be of general interest to review the question. In the first place, engraving is almost a lost art—entirely so if comparison be made between present-day work and the rich beauty obtaining one hundred years since; and a desire to possess fine examples from a limited supply results in competition among collectors, and a consequent rise in market price, the ostensible reason vouchsafed being quality, rarity, and preservation. And here occurs a very strange situation. A full-length portrait of Mrs. Somebody-or-





"THE MORNING."

This print by P. W. Tomkins after Hamilton is one of a series often used by the "faker" for laying down with a view to deceive.

other (possessing no historical interest as a portrait of a celebrity) happens to have been engraved by Valentine Green or some other master of the art of mezzotint, and straightway the print becomes hall-marked as being worth, say, £100. Why? "Because," says the interested person, "it is a superb specimen of print." Yet the lady's husband, equally well engraved and by the same master, is ignored at £5. Why? It is just as fine, but a portrait of a mere man, therefore it is not for the work, but the pictorial beauty—a handsome woman.

And yet again occurs another contradiction. I refer to a fine full-length portrait of some celebrity in state robes. There are plenty, and many of them are imposing and very beautiful, yet they may be picked up for a few pounds—sometimes shillings, and should be capable of giving the lover of fine engraving every bit as much pleasure as the £100 item. The real factor in prices is Fashion pure and simple, and collectors and others seem to follow like a flock of sheep in this matter. There are plenty of high-priced prints that are nothing

short of ugly, although perhaps finely engraved, and there are certainly plenty of low-priced examples that are very beautiful and as fine as it is possible to find.

Again, a proof impression of a print will realise, say, £50; while the very next impression struck off the plate will realise no more than £ 10, simply because it bears the title—the print itself is just as fine; indeed, the difference between the two would be imperceptible. Therefore to the collector I say, Be guided by quality and not by the presence or absence of an inscription. A mutilated impression, if fine, should be preferable to an ordinary one with full margins and in perfect condition. Too much importance is attached to "margins"; the inch or two of blank paper frequently works out at a tremendous figure. Take, for example, a proof with full margins worth £100; cut this same print down to the edge of the engraved surface, and what happens? Ten pounds would be nearer its value or, to be more exact, the price it would realise. Therefore the undecorated blank margin is worth far more than the print. This sounds like sheer nonsense, but Fashion decrees that it shall be so, and it is.

A few years since there was eager competition to possess fine examples of line-engraving of the English school. Examples of the work of Robert Strange, William Woollett, and others realised high prices; to-day a few shillings will purchase beautiful examples that once realised as many pounds. Fashion is responsible for this, for to the real student it is difficult to surpass a really fine specimen of line-engraving, and a century since both the English and French schools were at their best.

In order still further to press this subject of anomaly, we will examine the present-day attitude towards painting in oils. A pair of portraits might be offered at auction and catalogued as follows: "Portrait of a Lady, by John Hoppner; ditto of a Gentleman." The unknown "lady" will realise, say, £300, but the poor "gentleman"—well, £50 is enough for him; yet the work shall be equally fine in every respect. This "fashion" applies to most

portraits of the English school temp. 1750-1820. When, however, we go back to the Holbein period there is no distinction made, and both sexes are on an equality, says "Fashion."

What Prints to Collect.

This can be summed up in one word— "quality," and, happily for the collector who prefers one hundred fine prints at a sovereign apiece to one print for one hundred pounds, this is quite easy once a knowledge of quality has been acquired. Shall it be line-engraving? -well, there were no finer exponents than Robert Strange, Raimbach, Woollett, and those engravers employed by J. M. W. Turner. Fine examples of the work of these engravers can be acquired for a few shillings apiece, and the mezzotints may be added to the collection for not much more. Then, again, most superb examples of colour-printing may be acquired for less than £1 each, so long as the collector is looking for quality and not subject. Once at a London print sale I acquired for the modest sum of nine shillings three of the finest examples of engraving printed in colours that exist. The subjects were "The Holy Family," by Antoine Cardon, and two others by P. W. Tomkins; all Scriptural, certainly, hence the price, but the quality of both the engraving and the printing in colour could not be excelled. A collector should acquire those things that give him personal delight in studying their beauty, and not buy expensive items about which he is more or less anxious of realising a profit in the future. As attention becomes drawn to the wealth of beautiful engravings that may be acquired for next to nothing, the value will certainly rise; therefore, if a print only costs one shilling, and it is beautiful, buy it if it pleases, as the investment will be a good one.

The primary incentive to print-collecting should be the pleasure to be derived from the possession of examples of a lost or a waning art, and there is no doubt that present-day productions are hopelessly inferior to those wonderful examples of a century since. It is doubtless on this account that the competition

existing to-day is mainly responsible for the high prices associated with certain English prints. These said prices place certain items beyond the reach of the average collector; but he is still in a position to acquire examples of the very same engraver for a comparatively small sum, and, furthermore, equally good examples in so far as regards quality of engraving and impression. The question therefore arises, Why pay high prices for "subject" only? A portrait of a divine or someone who has not become famous may be acquired for a few shillings, and it will be as fine in every way as the hundred-pound print of some female celebrity. Print-collecting, therefore, is within the reach of all, and I think of no nicer hobby than the acquisition of, say, one fine example of every British engraver, irrespective of subject. A really representative collection of the works of English engravers might be formed at less cost than would suffice to obtain one particular fashionable item. Not long since over two hundred pounds was paid at auction for a cut-down first





"A ST. JAMES' BEAUTY."

This subject by Bartolozzi after Benwell is another favourite one with the "faker," and is often met with on old paper.

state of a female portrait engraved in mezzotint after Sir Joshua Reynolds. This sum would go a very long way in fine portraits of "nobodies" at five shillings and ten shillings apiece, and some of them would be of the same quality. I imagine that a complete collection of, say, one example each of all the English engravers in mezzotint would be a unique series outside museums, &c., and although the individual items might be acquired for quite small sums, the whole would form an interesting gallery.

As previously stated it is easy to procure exquisite examples of colour-printing for comparitively small sums if only the subject is not taken into consideration. The value side of the question has already been discussed at some length, therefore further remarks are unnecessary. In these days of disappearing landmarks and the growth of cities a most interesting form of print-collecting is that in connection with topography. Let the collector whose interest lies that way acquire what he can in connection with his own town or county, and he will

possess something to interest many. As he can commence with a county map published in 1610 for the outlay of a few shillings, he will from the start possess something out of the ordinary. I refer to the series surveyed and published by John Speed. Many of these county maps were executed prior to 1600, and the alteration in the spelling of various places is most interesting. Here, for instance, is an item, three hundred years old, and obtainable for a few shillings. Then, again, considerable interest attaches to London, the premier city of the world. There are heaps of old prints depicting the cities of London and Westminster, ancient hostelries, streets, markets, bridges, all long since done away with. One of the most interesting series of coloured aquatints dealing with London a century or more since is that issued under the title of Rowlandson's "Microcosm of London." These plates are to be picked up singly at 2s. 6d. and 5s. each, and they form a most truthful and interesting record. "The Pillory, Charing Cross," "The Westminster Cockpit," "The Post Office," "The

Watch House," &c., are all delightful records of what once was. Needless to say, in a few years the above-named prints will be of greater scarcity and value. The collector to-day may with certainty rely upon a safe investment that will yield considerable profit, apart from the pleasure associated with forming the collection, be it large or small.

To revert to portraits, I venture to say that no form of wall decoration is more imposing for a hall, study, or library than a well-selected series of Speakers, judges, and literary men generally from, say, 1790 to 1820. A few fine mezzotint portraits will "light up a room," and, suitably framed, afford a means of decoration that the highest in the land would not be ashamed of, and at the same time involve no considerable outlay.

With regard to the finer examples of lineengraving, it is curious that during the last thirty or forty years there has been a great drop in value, no doubt largely due to deaths among the old school of collectors, who were fully alive to the fact that considerable beauty lay therein. Who could wish for a more pleasing line-print than one engraved by William Woollett? To-day good specimens may be acquired for less than a sovereign, whereas years ago the same print would have realised £5 or £6. The same state of things is observable in relation to the works of Robert Strange, a most superb engraver in line. It is no exaggeration to say that to-day will see the purchase for shillings of what a few years since would have cost as many pounds. Therefore the humble collector is to be congratulated, as the fashion will assuredly change.

English Mezzotints.

Our Plate XVIII. of Val. Green's rendering of the portrait by Sir Joshua Reynolds of Lady Elizabeth Compton has been selected as a worthy example of this particular branch of art, wherein the engraver has, if anything, emphasised the beauty of the original picture, and permitted present-day enthusiasts to rejoice in the possession of an exquisite specimen of the engraver's art. It is a thousand pities that





"MRS. FITZHERBERT."

This print by Condé after Cosway is yet another of the series which is much reproduced. In original state it is one of the prints that the connoisseur covets, but in its reproduced form it oftener finds a "victim" in the mere collector.

English mezzotinting was ever allowed to languish, as with the more modern arts of reproduction, there is a grave doubt whether it will ever revive. Photogravure, coupled with the long gap that bridges the masters of the cult existing at the close of the eighteenth century and the artists of to-day, has killed the charming art of the mezzotinter. A champion is not required to sing the praises or point out the beauties of the engraver's art of a century since; the fact is only too apparent to anyone capable of appreciating genius. The most remarkable thing in connection with the rise in engraving in England of a hundred years ago is the curiously brief period that ushered in a host of artists who seemed to have been born simultaneously or within a few years. Prior to 1780 high-class mezzotinting scarcely existed, and within thirty years it seemed practically to die away, leaving one or two celebrities only to carry on the art. Of these Samuel Cousins must rank as the premier in portraiture, and the engravers employed by J. M. W. Turner were pre-eminent in landscape. A modern five or ten guinea proof of to-day will scarcely be in demand in years to come—at any rate to nothing like the extent that surrounds the work issued during the decade 1790-1800.

Safeguarding Prints, Drawings, and Paintings.

By far the best means of preserving engravings is to keep them in a guard-book, with each print separate; but the objection to this with the modern collector is that he is not enjoying the full decorative value which would accrue were the prints framed and duly hung. Many thousands of pounds in value have been sacrificed by injudicious framing, and explicit instructions should be given that a print should not be mounted or laid down. If a mount be required let the print be simply hinged in position so that at any time it may be instantly removed.

The effect of strong light on colour is a subject that is all too lightly regarded, and it behoves the collector to pay attention to this really serious matter. The action of sunlight is in some cases highly injurious, and yet in others it may be very beneficial. For instance, a picture that is very dark and obscured by varnish or in which the oil has risen to the surface of the paint may be greatly improved by placing it in a position where it will receive the full benefit of strong light. Some authorities state that if a picture be hung in a subdued light it will become darkened throughout and generally depreciate. This may be so, but there is little doubt that a very long period would have to elapse before any appreciable difference were noticeable. On the other hand, exposure to sunlight will be readily apparent in a few hours.

Take an ordinary piece of white paper, fold it, and place it in the sun for a few hours. On examination it will be found to have become decidedly yellow, and inside, where the light has not penetrated, it will retain the original colour. This proves that light is more active than darkness in affecting colour. In order, therefore, to guard against any degeneration, delicate drawings, coloured prints, or for that matter any prints, paintings, &c., should be hung in such a position that strong light, otherwise than

artificial, cannot fall upon them for any appreciable length of time. At the same time this said action of light can be taken advantage of, and if a print or other work of art, particularly one on paper, has become brown or fox-marked it may be wonderfully improved by judiciously exposing it to sunlight. A really good plan to follow with an ordinary collection is to shift about the various pictures or drawings comprising it so that each gets about a similar amount of illumination in the course of a series of years. No doubt the real cause of a painting becoming dark when hung in a very poor light is the rising to the surface of the oil used in the manufacture of the paints, and there being no strong light to absorb this, the whole degenerates. The priming on the prepared canvas or panel is an all-important factor, as an examination of the work of the old masters will quickly prove. In the early days it was customary to prepare the groundwork with a mixture of chalk, pipe-clay, and parchment boiled down, or with pure fishglue; and it is remarkable to note the purity of the colours, which in many instances are as brilliant to-day as they were on the day they left the artist's easel. The majority of present-day products can scarcely be placed in the same category as those compounded three, or even four, hundred years ago. Lead is the greatest difficulty against which the artist has to contend. Its liability to oxidise is apparent in the majority of cases wherein it has entered into the composition of the various colours used for either oil or watercolour. Who has not seen a drawing executed in what is known as body-colour—i.e., a proportion of white is mixed with each colour having that familiar chalky appearance? Old fans and drawings on vellum are often met with, and in some cases the whites have gone quite black or very grey. This is entirely due to the action of lead, and affords a useful object-lesson.

While on this subject I will mention a very simple remedy for this form of blemish. With a camel-hair brush lightly touch the affected portions with a little neat peroxide of hydrogen, and in the majority of cases the discoloured reds

and whites will at once resume their original tints.

Of all the destructive agents I think that damp must be considered the most harmful to pictures, prints, and any material that is not of the nature of porcelain, glass, or metal. A print after hanging on a damp wall for some time will become utterly perished. The fibre of the paper is a thing of the past, and the surface will provide a congenial ground for the cultivation of certain low-down fungi whose action is destructive to the ink and paper. Therefore, whether a wall be damp or not, ensure ventilation by tacking a section of cork at the back of the frame and at either corner. One cork will suffice for one picture, and should be cut into four segments. This insures ventilation at the back of the picture, and constitutes the most efficient antidote to the action of damp.

Gas fumes are another very serious danger, and it is necessary where a painting is exposed to such that it be glazed and the glass pasted in position and the back of the picture also well protected so that the fumes cannot penetrate.

Picture-wire perishes rapidly when used in a room lit by gas, and if brass is susceptible it follows that paint or paper is far more so. Many valuable pictures have been ruined through the supporting medium giving way, and a periodical examination is very necessary. On certain days—particularly when the temperature has risen suddenly after frost, for instance—the surface of pictures will run with moisture. This may do great harm, and should be immediately removed with a soft leather or sponge, as the moisture will otherwise penetrate through the cracks in the paint and materially assist disintegration.

Another important point is that of insurance, on which subject it will be as well to offer a few remarks. In order to be safeguarded a collection must be catalogued and the various items assessed by a qualified valuer, whose figures must be accepted by the insurance company, and in whose hands a copy of the inventory has been placed. One of the largest companies is prepared to issue on these conditions an "indisputable" policy at a premium of a few shillings per cent., which covers all risks—that

is, loss or damage by fire or any other cause, including burglary, larceny, accident, &c., &c., the only other expense attaching to this excellent mode of insurance being the cost of compiling the priced inventory, which involves an outlay of from 1 to 2 per cent., according to the distance from London and the value of the property. This priced inventory is a most valuable asset, as in the event of the collection or any individual item being sold, the owners are in a position to combat the conspiracies common to every sale room, and, at the same time, the owner is in a position to know exactly what is genuine and what is not; most collections possess one or two items that are not quite what they purport to be. Furthermore, this system relieves the owner of that serious and ofttimes impossible duty of proving the value of a lost article which most insurance companies insist on before settling a claim.

Oval Mount-Cutting.

The term "oval" applied to mounts and frames is usually a misnomer. The word, of





"NELL GWYNN."

Of the many existent portraits of this historic woman, that by Ogbourne after Lely here given is the one most notoriously reproduced.

course, literally means "egg-shaped," but the curves shown in early "oval" prints are neither egg-shaped nor elliptical. However, the word must stand for want of a more suitable one.

It frequently happens that occasion arises where a so-called oval of a certain size requires a mount or a black-and-gold glass.

This is often advisable when the margin of a print has been cut away or hopelessly damaged so as to be rendered unsightly, thereby spoiling the print that otherwise is in good condition. In the case of a coloured oval, a black glass with ornamental stars and a gold-lined border is wonderfully effective, as is also an oval frame. Or again, a square or an oblong print may have received serious damage or curtailment, and if it be framed or mounted to an oval it is still effective, and the best portion does not suffer, as the damaged part is invisible. Moreover, it is a source of pleasure to the amateur or collector to be able to cut a mount of any size, colour, or shape, and as most prints or drawings are improved thereby, it is as well to know how to carry out the operation. Some subjects, notably mezzotints, look wonderfully well on just plain rough brown paper; this is especially noticeable when a print has a small margin and is framed in black and gold. But, of course, this is a matter for individual taste.

A square or an oblong mount is readily cut with the aid of a sharp knife (mount-cutter's for preference) and a metal straight-edge, as the dimensions are easily ascertained, and, the distances being marked off, all that is necessary is to make a clean cut.

By mount is not necessarily meant an opening cut in a piece of Bristol board or paper and placed over the print, drawing, or picture. A mount may be a perfectly plain piece of material on which the print is simply laid. In these circumstances it is advisable to affix by hinging at the top or sides only the folded paper, hinges being fastened at the back of the print so as to be invisible from the front. A piece of stout paper 2in. long by rin. wide should be folded and affixed with a little paste; or the print may be held with a narrow strip

of paper extending the whole length or width. For small prints or drawings ordinary stamp edging will do, but if a really good lasting hinge

desired proceed as follows: Lay the print face upwards on the support on which it is to rest, and make a tiny mark at each corner. Now if it be proposed to hinge it at the side, fold the print over off the mount and face downwards, and adjust the edge so that it is in line with the two points marked. Now cut a strip of paper almost the full length of the print and about 3/4 in. to 1 in. in width, paste this, and arrange in position half on the print and half on the mount. Smooth into thorough contact, and fold the print back into position on the mount. The hinge will now be folded, and simply needs going over with the handle of the burnisher or a tooth-brush. On the whole, I think the hinge is best placed at the top instead of at the side of the print, as it hangs more naturally, and is less likely to suffer injury while being examined.

Cut or sunk mounts, as they are called, should be hinged to a back of equal thickness,

and the print or drawing lightly affixed in position so that the opening comes opposite the picture. Treated in this way either the one or the other can be instantly unmounted, and is less likely to acquire stains.

Now to be able to cut an oval is, as previously stated, a source of pleasure to many amateurs, and I therefore think that it would not be out of place here to explain how such a curve may be drawn by means of compasses.

First measure the oval required—that is, the length and breadth. Draw two lines A B, C D, of the exact length and breadth required and cutting one another at right angles at their middle point o. Now mark off from A O, C O, and B O equal distances A E, C F, and B K; the exact lengths do not matter so long as they are less than C O, but, as will be shown later, the shape of the oval (but not its length or breadth) is controlled by them. Proceed by joining E F and drawing P G perpendicular to it through its central point G, cutting C D (or C D produced) in P, as shown in the diagram. If a circle be now drawn with centre P and

radius P C it will cut P E and P K in (say) H and L; and if circles be drawn with centres E and K and radius E A they will be found to touch the first circle at H and L exactly. An arc drawn

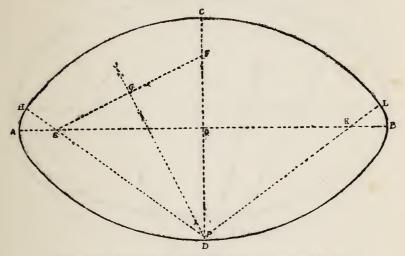


Diagram for describing an Oval by means of compasses to given dimensions. Showing a curve with a "pointed" effect, but to too great an extreme to be of use.

through D from a centre along O C, and with the same radius as the first circle, will complete the oval.

The diagrams on pp. 115 and 116 are drawn to the same length and breadth measurements,

but it will be seen that they vary considerably in effect. The distances A E, C F have purposely been taken rather short in the first diagram

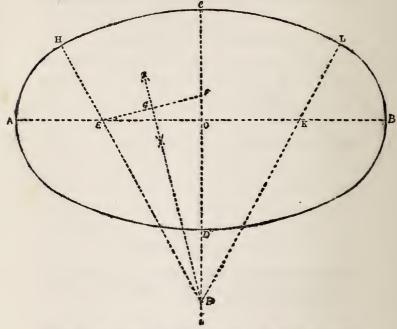


Diagram for describing an Oval by means of compasses to given dimensions. Showing how to obtain a curve with a "square" effect.

and much larger in the second, and from these examples it will be understood that an extreme measurement either way does not give a pleasing oval and is undesirable. I may also add that care has to be taken in describing these curves, as if not accurately drawn the arcs of the circles will not meet as neatly as they should.

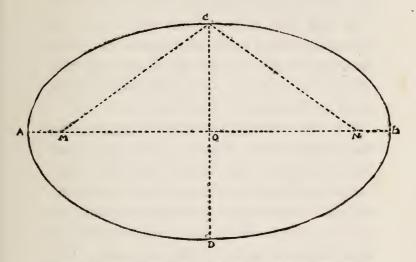


Diagram for describing an Oval, a true ellipse, to same dimensions as the other figures drawn by means of compasses.

The ovals just described are suitable in many cases, but sometimes a true ellipse—as shown in the third figure—may be desired. The following is the simplest and best method of describing such a curve: Fasten the ends of a length of

strong thread to two pins, push the latter into the drawing-board through the paper upon which the ellipse is to be drawn, and with a pointed pencil placed in the bight of the thread describe the curve, always keeping the thread quite taut. The size and proportions of the ellipse are governed entirely by (i) the length of the thread between the pins and (ii) the distance apart of the pins in the board. The first of these is the same as the length of the ellipse.

To draw the ellipse of fixed measurements, the length of the thread must be made equal to the length of the ellipse or a very little longer to allow for the loop round the pencil; and the distance apart at which to place the pins in order to obtain the width required for the ellipse may be found by trial. This distance may also be calculated mathematically. Suppose the ellipse is to measure 10in. by 6in. Then, referring to the third diagram, it will be seen that if AB (10in.) and CD (6in.) are the axes of the ellipse, of which o is the centre and PP the pins, PC will equal 5in., because it is half the length of

the thread, and co will be 3in., being half the lesser diameter of the ellipse. Now POC is a right-angled triangle, and therefore old Euclid tells us that the square of PC is equal to the sum of the squares of PO, OC. Putting in the known measurements, we get $25 = PO^2 + 9 - i.e.$, $PO^2 = 16$, from which it is seen that PO is 4in. long. In other words, the total distance between the pins PP must be 8in.

The same procedure will give the distance for any required measurements; but it will usually be found necessary to take the square root of awkward numbers, especially when working to fractions of an inch; hence it is simpler to arrive at the distance required between the pins by experiment.

To those who would like to pursue this subject still further, I would refer them to a chapter in "Picture-Frame Making for Amateurs," in which other methods of striking an oval are discussed.*

^{* &}quot;Picture-Frame Making for Amateurs." By the Rev. J. Lukin. Price 1s. 8d. post free from *The Bazaar, Exchange and Mart* Office, Windsor House, Bream's Buildings, E.C. 4.

CHAPTER VII.

WATER-COLOUR DRAWINGS.

Removing Varnish.

It is rarely that drawings are found varnished, but as this occurs a chapter on the treatment of such will be useful. Quite recently I acquired a charming drawing in monochrome by Francis Wheatley, R.A., to which some ignorant person had applied a liberal coat of varnish, and the appearances pointed to its having been in this condition for very many years. There being no fugitive colours, the drawing (which had been mounted on heavy cartridge-paper) was placed in a cold-water bath to which had been added a very small quantity of .880 liquid ammonia. The proportions were I qt. of water to I oz. of liquid ammonia. The tray was then gently rocked to keep the liquid

moving, and after five minutes a change was noticeable. The varnish commenced to flake off, leaving the drawing clean and to all appearances unharmed. I quite expected the colour to be more or less affected, but it was not, and I made the bath still stronger by adding another ounce of liquid ammonia. This greatly facilitated the removal of the now perished varnish, which came away freely at the slightest touch, and in a few minutes the drawing was as clean as the proverbial new pin. During the operation the drawing was thrice removed from the bath, placed on a piece of plate-glass, and held under the tap. The force of water was sufficient to loosen the varnish and wash away as it did so. This experiment was entirely satisfactory, and leaving the drawing to soak a little longer, I found that it would quite easily peel away from the mount.

It should scarcely be necessary to state that this treatment with ammonia would *not* do with an ordinary water-colour, as some of the pigment would be sure to run; but in the case of sepia or a monochrome work it is quite safe provided the bath be weak.

Detaching Drawing from Mount.

This process might be explained with advantage, as there is always a danger of tearing wet paper. Place the drawing face downwards on the glass support and bend one corner of the mount upwards and backwards away from the corner of the drawing. It will probably separate immediately and droop forward on to the glass. Next take the mount between the thumb and first finger of each hand (I usually double it back on itself), and the drawing should slowly leave its late support and settle on the glass. If it refuses to do this without forcing, desist and resort to warm water, if there is no likelihood of the colour running.

If the back of the drawing has a slimy feel that betokens the presence of an adhesive a fresh supply of warm water and gentle friction with a brush will be called for. This will quickly remove the old paste and leave the back as clean as the front. In the case of the drawing



"MRS. SIDDONS."

An illustration made from a reproduction printed in colours and of the same size as the original (which was engraved by P. W. Tomkins after a painting by John Downman). When stained and mounted on an old stretcher, lightly varnished, and slightly knocked about, it constitutes a very dangerous "fake" calculated to deceive many.



referred to there were still no signs of the colour moving when it had reached the present stage, and it was therefore placed first between dry, clean blotting-paper and afterwards under pressure. The following day there was not the least indication of any varnish having reposed upon the surface, and an apparently spoiled gem became worth several pounds.

"Foxing."

This condition, to which reference has already been made, is as common in drawings as it is in prints, and the causes being identical in both, the treatment also would be identical were it not for the danger that arises when an ordinary water-colour is placed in a bath. Sometimes all the colour will stand; but the chances are that in certain cases some of the pigment will run badly. In others it will simply fade, depending entirely upon the basis of the colour, the age, and the paper on which it has been used. On the whole, the safest method of giving a drawing a bath is that of a semi-dry one. If a drawing is heavily "foxed" and otherwise

stained place between blotting-paper (a thick white variety is best) that has been well moistened with an ordinary strong solution of Liquor Sodæ Chloratæ—say, 40z. of soda to a pint of water. After wetting the blottingpaper with this mixture allow it to drain until there is no actual wet on the surface. Then place the drawing between the blottingpaper, and arrange between two pieces of thick glass to retain the chlorine that would otherwise evaporate. At the expiration of an hour the spots should be very faint and the water stains almost gone. If this is the case place between clean, dry blotting-paper and under very slight pressure. The remainder of the marks should disappear as the paper becomes dry. Do not attempt to deal with a valuable drawing until this process has proved harmless. An excellent, and, in fact, imperative, motto is: Do not experiment with valuable works. There are heaps of next-toworthless drawings, prints, and pictures that will do to experiment upon. Above all, never attempt to force matters; be patient, and use

the weakest possible solutions that the work requires. A little experience will soon permit the operator to tell if an object will lend itself to successful manipulation.

Care of Miniatures.

Should the adventurous amateur feel a deep inclination to undertake the cleaning of miniatures of worth it had better be suppressed at the start, as this, the most delicate form of the painter's art, is sure to end disastrously if anything more than a light dusting with a tuft of clean cotton-wool is attempted. While on this subject it may not be out of place to say that the chief enemies to miniatures are damp, mildew, strong light (especially sunlight) and heat. To guard against the first-named is not easy, especially if owners are unwise enough to hang their treasures against a wall without taking the precaution to prevent them from coming in actual contact by attaching small pieces of cork to the frames. So far as sunlight is concerned this may be kept away by drawing a curtain in front of them.

CHAPTER VIII.

CLEANING AND REPAIRING OIL-PAINTINGS.

Watchwords.

Lest some may wonder why I have gone so fully into the matter of cleaning and restoring engravings, and stopped short, as it were, at cleaning in the case of paintings, I will begin this chapter with an explanation. In order to restore the former one need not be an artist; but to undertake the restoration of the latter one needs to be something more than an artist, or assuredly the great Turner, when he found that some of his works were in a bad state, would have set to work upon them himself instead of seeking the service of a professional restorer, as we know him to have done. Nor does Turner stand alone among artists of

renown who would not undertake the delicate task of repairing the damage that time and the effects of atmosphere, &c., had caused. This being so, it would be the height of folly for me to take upon myself the grave responsibility of advising an amateur to do what some of the greatest artists of their time shrank from undertaking—the renovation of their own canvases.

Though I am not one of those who think and preach that pictures cannot be satisfactorily restored, yet I am one of those who think that the men who may fairly claim to be considered as capable restorers of pictures are singularly few. It seems but the other day that I was reading a correspondence in the Times on the advisability of cleaning pictures, yet it must be nearly three decades since a letter signed "A Tory on Art" appeared. His views are thus expressed: "It is as idle to talk of restoring a picture to what it was as to try to push back the iron hand of Time. We must make up our minds to put up with a certain amount of dirt, and study the works of departed geniuses through the warm haze of time."

To those who can recall the harm that was done to many of the masterpieces of our public and private galleries some eighty or so years ago, when the application of a certain varnish with which oil was incorporated was very freely indulged in, such a letter as that from "A Tory on Art" may very readily be imagined. And so it has been from that time to the present. All sorts of nostrums have been devised having for their object the renovation of oil paintings, and the result has been that, instead of tending to improve them, they have in many cases tended to hasten their decay.

Bearing these things in mind, and being practically acquainted with many masterpieces which have been so crudely treated as to suffer deterioration at the hands of the so-called restorer, naturally makes me diffident about recommending so delicate an operation as picture-restoration as ordinarily understood being undertaken by any but the competent. It is scarcely necessary to say that the portrait that one sees now and again exposed, with half

its surface in about the condition it would be when it left the artist's easel and the other half so obscured that it can only with difficulty be seen, is often a "fake"—a comparatively recent work stretched upon an old frame and then ingeniously worked up. I have deemed it advisable to mention this in case some unsuspecting individual might think that it always represented a genuine example of the picture-restorer's art. In order thoroughly to understand the difficulties of the restorer one has but to take into consideration how the great masterpieces are "built up" of a series of oil and varnish colours, the latter of which give those exquisite transparent tints and glazings that have been the envy of later generations. Just imagine, therefore, how readily—nay, with one rub of some of the fluid solvents that were and now are used—these delicate touches that the artist gave can be effaced. The real picture-restorer should be as much an artist as the actual painter of a canvas. Nay, more; for whereas, say, one of our great painters could depict in his own inimitable way certain subjects,

the picture-restorer must be acquainted, and minutely acquainted, with the technique of the work of all the masters that it may be his lot to restore. It is, therefore, from considerations such as these that I hesitate to recommend the restoration of pictures to all and sundry.

What May be Done.

This brings me to the point of my subject as to what may be done by any amateur who has, say, a time, smoke, or dirt-stained oilpainting. From time immemorial washability has been regarded one of the advantages that the oil-painting possessed over other mediums. At any rate, so long ago as 1494 Antonio da Messina, after seeing an example of John van Eyck's work at Naples, was so impressed therewith, and with the fact that it might "be washed with water without suffering any injury," thus giving it a material advantage over the old method of distemper-colouring, that he used every means in his power to obtain from Van Eyck the secret of his newly acquired medium. To what extent he succeeded is shown in a history of the progress the art then made in Italy.

Those who in later years have made a study of the chemistry of paints and varnishes regard the washing of pictures as highly detrimental, preferring the gentle friction of day-old breadcrumbs to water, and especially when used with soap. True, the removal of surface dirt by such means would be a far lengthier process than by water and a sponge, yet it would unquestionably be safer. Needless to say, directly the crumbs show signs of dirt they should be changed for a fresh supply and this method should be repeated as often as necessary until the painting is clean. On no account should the breadcrumbs be used when hard, and it is also advisable to keep them in a clean tin or similar receptacle.

There are slight variations adopted by individuals in order to bring about the desired result — the removal of surface dirt from paintings—but I am sorry, however, to say that the average amateur spoils a large proportion of the pictures he attempts to clean.

What, therefore, is proposed here is to enumerate methods which have been proved of value, and to warn those about to embark on what may be termed the quick processes sometimes adopted against the risks that they undoubtedly run by resorting to others which, though they may succeed in eradicating dirt, also materially alter the wonderful tones and glazings which it was the delight of the old masters to impart. We are, or should be, aware of the great folly of daubing a precious work with a preparation of boiled linseed oil and varnish which was considered the thing by the "restorers" at the latter part of the eighteenth and the beginning of the nineteenth centuries. The result of such vandalism was practically to ruin for ever the marvellous creations of our greatest painters, and in every case to rob them in a few years of their exquisite brilliance and most of their charms. The effect of treating them with this oil-varnish compound was so to darken them that the transparency of the painter's colours was absolutely obliterated, and, what is more,





"VISCOUNTESS ANDOVER."

A "faked" print made from a reproduction printed in colours, same size as the original. This print had been mounted on an old stretcher and placed in a contemporary frame. The surface had been elaborately stained and carefully injured and the back pasted up with a portion of newspaper dated 1820. The print (which was engraved by Wilkin after a painting by Hoppner) is one of a series known as the "Hoppner Beauties," all of which are scarce and valuable when printed in colour, fine plain first states being worth some £20 each.

after a few years it was found absolutely impossible to remove the injurious compound.

That oil-paintings in the olden days stood more in need of a protective agent, such as glass, than they do in the present time, when electricity has been brought into the service of man as an illuminant, is perfectly true. Still, apart from that a proper varnish is as much as ever called for in order that the painting may be rendered as far as possible impervious to the effects of atmosphere, the damp that seems inseparable from our temperate climes being probably the greatest enemy. Varnish for the protection of paintings is no modern innovation; it was in use, at any rate as a protective agent, as early as the beginning of the fifteenth century. What the renovator of a picture has to consider is the kind of varnish he employs—it must be pure mastic.

From what has been said it will be readily assumed that the treatment of oil-paintings should be restricted to the simpler processes which may be undertaken with safety, as irreparable damage may be easily caused by an

inexperienced hand. In any case, it is absolutely essential that quite a long apprenticeship should be devoted to experimenting on pictures of no value—that is, of course, when the process involves the use of chemicals, &c., that are dangerous.

Oil varnish is much more stubborn than is mastic varnish. I have elsewhere given a method for determining this, but it may very well be repeated. With some sharp instrument, or even with the finger-nail, scratch an unimportant portion of the surface of the picture. If a white mark is easily produced it may be concluded that it is spirit varnish with which the painting has been treated. On the other hand, if it be a hard oil varnish, such as copal, it will resist the scratching. These varnishes need very different treatment to facilitate their removal, and they will be referred to in their proper place.

Preliminaries.

Though it is apparently a simple operation to clean an oil-painting, it is one that needs to

be carefully performed or harm rather than good will result. Generally speaking, the condition of the picture, especially when taken in conjunction with the varnish, must be the true guide to the method to be adopted. Before attempting to proceed with the work, it will first be necessary to remove the picture from the frame and to blow off all the dust which has settled on it. A pair of bellows will be found most useful for this. In addition to this it will be found of decided advantage to tighten up the wedges which are usually to be found at the back of stretcher-frames. This will have the effect of keeping the canvas tighter, and thus better able to withstand the pressure that must inevitably result from the cleansing process. The picture should then be in a condition for the next stage of cleaning. If the varnish be perished, more care will need to be exercised than if it be well protected by a coating of that medium.

Brightening Paintings.

Where a picture simply needs brightening, I have every confidence in recommending the following: Linseed oil (raw), 5 oz.; methylated spirit, 1 oz.; liquid ammonia, one or two drops; and the same of camphorated spirit. These must be shaken together thoroughly and applied on a tuft of absorbent wool. After rubbing the preparation well on the painting, remove as much as possible with clean wool. This will result in a clean and brilliant surface, obviating in many instances the necessity for re-varnishing or of varnishing at all.

Treating Unvarnished Paintings.

In picture-cleaning solvents are only used when a picture has been varnished. An unvarnished picture should be wiped over with a leather wrung nearly dry, after which the discoloured portions may be gently rubbed with a tuft of damp wool on which a little powdered calomel has been shaken. This will be found to effect wonders on a painting which has been

exposed to a dirty, smoky atmosphere, and if properly applied, it should not injure the paint. When dry, a slight white deposit will be noticed; this can be easily removed by the aid of a sponge or a leather *slightly* damped. The foregoing will be found invaluable in very many instances.

Removing Varnish.

Assuming that the varnish does need removal and it has been determined by the simple test given in the cases of prints that it is a mastic one, then this must be undertaken. The method of the removal will be contingent upon certain circumstances. In the case of a painting upon panel or upon copper, there is nothing better than the fingers, though the process is tedious and somewhat painful if long continued. If on canvas, it may first be necessary to reline the picture (on which subject I shall have something to say) or else to employ a preparation like "Anadeiktine."

If the picture be on panel or on copper and

is ready for cleaning, proceed to rub the surface with the finger-tips. After a few moments a white dust will appear. This should be brushed off with a silk handkerchief, and from then onwards the process simply involves patience and care so that the painted surface is not injured. If properly carried out the old varnish will be all removed, leaving the bright paint exposed, and unless some touching up or repairing is to be done, a coat or two of pure mastic varnish should be applied and no other kind used; or the preparations previously named may be used as safely and with as much effect on a panel or a copper picture as on one on canvas.

An easier, but much more dangerous, method of removing varnish is by means of spirits of wine. This process will save time, but the agent that will dissolve the varnish will also affect the paint, and it is a very delicate matter to determine exactly how deep to go. Still, practise with a picture of little value, and the experience gained thereby will, or should, avert disaster in dealing with something of value.

The operation may be conducted as follows: Procure some spirits of wine and also some spirit of turpentine and linseed oil. The solvent should be applied to a wad of absorbent cotton-wool, and held in the left hand. In the right should be held a similar wad moistened with turpentine and oil. The spirit will dissolve the varnish, and the oil and turpentine will arrest further action. It is very important to remember which hand holds the spirit, and to be extremely careful to rub on the oil and turpentine the moment after the spirit has been applied. It will be necessary to change the wads as they become dirtied with the varnish. The necessity for extreme care must be emphasised, or the surface paint will come away with the varnish. Professor Church considers, and rightly, the removal of old varnish as a most risky proceeding having regard to the fact that many cleaners of pictures pin their faith to "spirits of wine (60 over proof) diluted with one-fourth its bulk of water," the same arresters being employed as those named above for preventing injury to the paint.

Another excellent solvent for varnish is a solution of ammonia, which must be weak—say, one in fifty or less. This will readily dissolve the mastic and some other varnishes; but here, again, great care must be exercised, as some of the paint will be readily susceptible. Ammonia is a very powerful alkali, and an antidote should be handy in case of too far-reaching effects. Far better always is it to put up with a little dirt than to destroy for ever the "touches" of a master that no restorer can replace.

For the dissolving of certain varnishes I can recommend Acetone and Kerosene as of great value but only in the hands of experienced people. The former is the active agent and the latter the brake, or arrester. In the majority of instances three parts of oil to one of Acetone will suffice. The method employed is the usual tuft of absorbent cotton-wool, moistened with a little of the above mixture, and a second wad with the plain oil which must be used at once to check further action after the desired depth has been reached. Occasionally a stronger (or a weaker) solution will be desirable

and it is very necessary that a small and unimportant part of the picture be first experimented with in order safely to determine the correct proportions of the afore-mentioned agents which will best deal with the particular varnish that is to be removed. The operation itself is identical with that employed with other solvents: in one hand is held the wool with the solvent, and in the other the full-stop wad. A few rubs with a circular motion and an immediate application of the full-stop wad should enable the operator to form a fairly accurate idea as to the progress of the treatment. Little and often is a sound method, as when the paint is reached, so is the danger zone.

Recently I have met with great success in removing spirit varnish from pictures painted on copper and wood panels. Having determined the character of the varnish and assuming that the picture is painted on a smooth surface, apply a little fresh mastic varnish, thinned with spirit of turpentine, to a small portion of the picture (a corner is best as there is less likely to be any important work there).

After a few minutes this will have assimilated with the varnish already on the picture and the whole should be incorporate. While still "tacky" place in contact a piece of fine linen or cotton, the former for choice—an old handkerchief will answer admirably, or rather a portion of it. This should be well smoothed down and allowed to dry thoroughly. The piece of material used should be larger than the portion of the picture being operated on, this will leave a loose portion that can readily be held as a lever to strip away the whole. When the varnish has dried and the linen has been pulled away, turning it over on itself, as it were, the whole of the varnish on that part of the picture should come away, leaving the paint bare and uninjured. Needless to say this method is far safer than by any solvent or by friction.

Some oil varnishes need the most drastic treatment, necessitating the use of such agents as Liquor Potassae, Pure Alcohol, Naphtha, Ether, Oil of Spike, &c. These solvents are employed according to the degree of readiness





"LADY ELIZABETH COMPTON."

In this we have one of the most coveted of mezzotints, combining as it does all that is best alike in painter and engraver. Indeed, it would be difficult to surpass Valentine Green's fine rendering of Sir Joshua Reynolds's portrait.

evinced by the varnish towards dissolution. It must, however, always be remembered that all are dangerous, and arresters—such as linseed oil and spirits of turpentine-should always be at hand to check undue action. Another point to remember is that a picture being operated upon should always be laid flat, otherwise there is a risk of an excess of the solvent running down unnoticed and injuring the paint. Further, it is a sound axiom in picture cleaning to commence with a very weak agent and to work upwards in strength. For instance, when using spirits of wine it should be diluted with an equal quantity of spirits of turpentine, adding more spirits of wine if the action is too slow. A further safeguard lies in the addition of linseed oil-in the proportion of one part to six parts of the spirits, the whole to be well shaken before and while in use.

In selecting a portion of a picture for experimental purposes it is advisable to operate on the lightest part as this is almost certain to contain more lead and therefore to be less readily attacked by the medium employed.

During the process we would impress upon the operator the absolute necessity for a frequent examination of the wad of wool in order to ascertain if any of the paint has come away. If it has, desist at once and immediately apply the full-stop wad.

Especially will it be necessary on no account to employ spirits of wine on an old and valuable painting on which an artist may have introduced a little water-colour, as not infrequently happens. To do so would for a certainty prove disastrous. This precaution also applies, according to Professor Church, when mastic megilp has been used as the painting medium.

Trade Preparations.

"Anadeiktine" is a preparation which has been on the market for several decades. It may be described as a mastic varnish and dirt remover, and this, too, without the picture being injured by the treatment. Everyone who has had any experience in attempting to remove even spirit varnish—the easiest of all

the varnishes to deal with—must be aware that there is no lightning process that is available. The work by any of the methods ordinarily practised is tedious in the extreme. "Anadeiktine" however, it is stated, will remove at one process mastic varnish and dirt, while the method of its application is such that any person with commonsense should be able to employ it with success. No elaborate instructions are issued with the preparation, nor, indeed, are they called for. All that is necessary is to cover the painting to be cleaned with a thin application of the preparation, using a hog's hair brush for the purpose, and leave to dry-a matter of a few hours. At the expiration of that time it should be subjected to gentle friction, using the soft, fleshy part of the hand. The result will be that the varnish and dirt—or as much of it as has amalgamated with the preparation-will come away, leaving the picture clean and bright. Still, should the dirt and varnish be of old standing and particularly stubborn, a second or even a third application may be necessary. Here, however, the cleaner must exercise due

care to see that he is not getting on to the paint. The chief precautions are to shake the bottle well before using and to apply thinly. The results will more than justify the experiment.

Repainting.

With any picture that stands in need of repainting here and there after the varnish has been removed, the great difficulty is in treating it so that the colours will "stand," i.e., not alter. For instance, a damaged face may be repainted in so that the match in colour is exact, but in six months there will be a large difference as the paint hardens, and only an expert in such matters can mix the proper colours. And here I would like to recommend the picture-restorer, if possible, to read, mark, and thoroughly digest Professor Fielding's excellent treatise on the theory and practice of painting. It was published by Akermann as long ago as 1846, but its information is as sound to-day as it was when the book was first issued. He should also study carefully Professor Church's "The Chemistry of Paints and Painting" (Seeley and Co.).

Repairs to Canvases.

It is not at all uncommon for pictures to meet with accidents, such as falling from a height owing to a perished wire or a cord, or less often to the screw-eye becoming loose. their fall should they come in contact with any sharp surface there is more than a likelihood of their being considerably damaged. The amateur, fond of his pictures, may like to attempt the repair of them himself, and really the work is not difficult of accomplishment. the tear is very slight it will be found sufficient to cover the back of the canvas in its vicinity with melted wax. Where, however, it is of larger dimensions a fresh piece of canvas should be made to cover the torn part. The piece of canvas having been cut to the required size, sufficient powdered mastic should be placed between the two surfaces and a hot iron passed over the back, when a capital join will be effected, and, if properly made, there will not be any very noticeable sign of the injury which the picture had received. Needless to say, the iron, if too hot, will injure the painting, and in any case contact would be of very brief duration.

Re-lining.

This operation is frequently rendered necessary by the condition of the canvas on which the picture is painted. Indeed, when this is in a thoroughly rotten condition, due to a variety of circumstances, nothing but re-lining will often save a valuable picture from perishing. Relining really consists in providing the picture with a fresh canvas back, or, rather, in laying down the old on a fresh one. Though this may appear a fairly easy undertaking, yet it is not one which I can honestly recommend the amateur to undertake, more especially as for quite a small sum there are dozens of men who will carry it through. The risk is too great, at any rate in the case of a valuable picture or one on which a great store is set by reason of family or other ties; while a poor example is not worth the time that re-lining entails. Again, in order to prevent injury from animal and vegetable organisms it is not unusual to dress it with

a most deadly chemical. So that in all the circumstances the re-lining of a picture had better be left to those individuals making it a special branch of the picture-renovator's art.

In case the services of a picture re-liner and restorer should be needed, I would mention the name of Messrs. William Holder and Sons, King Street, Covent Garden, W.C. 2, whose work is excellent.

An Assumed Case.—Routine Work.

We will assume that a picture is in an old, dirty, and generally unsightly condition, with, say, a hole or two into the bargain. The procedure is usually as follows: Re-lining, stopping—i.e., filling up the holes with paste, generally composed of glue and whiting—cleaning, repainting where necessary, and, lastly, revarnishing. In the case of a hole in need of reparation I would suggest a slight divergence from the above-mentioned procedure, which, of course, relates to paintings on canvas. If the hole or tear is just a simple affair of no great importance and the picture is in no need of

further restoration, a satisfactory join can be effected by gluing a small piece of linen over the hole at the back, or by laying the picture face downwards on a flat surface and dropping melted wax (hard) on to the torn edges, afterwards going over it with a warm iron; or, better still, partially melt the wax and immediately press with a warm weight. Wax will readily dry, and, what is more, will not contract in the process. With a little patience a really first-rate mend can be effected by these means and the use of a piece of canvas or linen entirely dispensed with.

An excellent method of mending a bad break, particularly when a piece of the canvas is missing, is as follows: Should the damage be in the background of a portrait little difficulty should be experienced in matching this with a piece from another picture. There are hundreds of portraits to be picked up for a few shillings each, and one of these may be sacrificed to great advantage. Having decided which portion of the portrait will best replace the portion in the picture under restoration, cut out a piece somewhat larger and as near the shape of the hole as

possible. Lay the picture face downwards, and fix this piece over the damage at the back (a little sealing-wax along the edges here and there will do). Now turn the picture over so that it is face upwards, and with a very sharp knife proceed to cut out the hole, making the jagged cut into a neat square or other suitable shape. By cutting right through both canvases a piece of the portion that was affixed to the back is cut away, and this will, of course, exactly fit the hole.

In order to make this operation quite clear, take an ordinary half-sheet of note-paper, cut an irregular hole in it, and then paste another piece at the back (or simply hold the latter in position by pressure for the purpose of demonstration). The paper or papers are now laid hole upwards on a smooth, flat surface and a cut is made all round the hole, going right through both pieces. Now discard the portion that surrounded the hole and insert the piece that was at the back; the fit must be quite perfect, irrespective of the shape to which it has been cut. (See Plate III., facing p. 27.) The picture should be

re-lined and the patch inserted, and if the canvas is of the same character the surface will be beautifully even and will lend itself far better to repainting than if the hole were filled with composition.

As additional to what has already been said in connection with mending a hole in an oil-painting, it may be stated that when fitting the patch to an old picture the paint will, of course, be very dry and brittle and liable to split up somewhat along the course of the rent. If a piece of paper be pasted over the surface prior to cutting, this tendency will be greatly minimised. A square or an oblong patch is by far the best, as the use of a straight-edge and very sharp-pointed knife permits of greater precision. Should a slight mistake be made, and the patch be not a perfect fit, repeat the process; it will only mean a slightly increased hole or mend. Having obtained a perfectly fitting patch, place the picture face downwards (on plate-glass for choice), insert the patch, and run a streak of melted sealing-wax along the join. Use very little, and when all the square has been treated

press with a hot or very warm iron, but do not leave the iron in contact for more than a second or the paint may be injured. The effect of the iron will be that the wax is melted and forced between the cut and will slightly overflow on to the surface of the paint, and by so doing it will serve as "stopping" for any small particles that have become detached in cutting. With a sharp knife the surplus wax may be removed, and if the whole be gently rubbed with a little pumice-dust it will be ready for painting. Properly inserted, a mend of this sort is absolutely invisible, and if the canvas be then re-lined and the proper pigments applied, no one could point out the damage. When a painting is badly cracked the usual processes of cleaning do not remove the old varnish from these cracks, and a needle-point or a stiletto may be employed with great success. Carefully follow the lines of the cracks, and the softened varnish will come away on the needle-point. Should this method not be deemed satisfactory, rub a little powdered resin into the cracks, and it will adhere to the softened varnish.

little friction will cause both to come away together. When using friction examine the work frequently by wiping away the dust. This is necessary in order to avoid damage.

Before proceeding with the operations in connection with the removal of varnish the painting should be subjected to a careful examination, as there is bound to be some portions that are far more susceptible to injury than others, and these are governed by the character of the paint. The whites and reds and those colours which contain lead will offer the greatest resistance to the action of the spirit used to dissolve the varnish, and it will be as well to take precautions to safeguard the dangerous pigments that will "fly" immediately the spirit comes in contact with them. In the case of a landscape the sky is almost certain to be the safest portion to tackle, but do not go deeply. In the case of mastic varnish, a good solvent is better than friction until the paint is becoming nearly exposed, when it is safer to use friction. Still, it is quite easy to do serious damage with friction only, as the surface of the picture is composed of "hills

and valleys," and naturally the tops of the hills are rubbed bare long before the varnish in the interstices is affected. With a panel or a copper picture, however, friction alone is advisable.

It is natural for the beginner to become anxious to see what lies beneath the dirt and varnish, and in his anxiety he is apt to forget prudence and to go too deeply, with the result that irreparable injury is done. It is so easy to take paint off canvas, but it is a very different matter to replace it; therefore let me once more urge the need for caution. Pause repeatedly and carefully examine the progress of the work. Do not attempt to get all the varnish off; a little left will not be very noticeable when the picture is re-varnished, and in any case is much to be preferred to injury and the loss of the "glazings" in a picture. No hard-and-fast rules can be laid down, as all depends upon the mediums used by the artist. Some colours will stand a tremendous amount of "pickling"; others, apparently the same, will vanish like frost before heat; and some surface touches may be likened to ice-crystals in delicacy, and some of the chemicals used to remove varnish may well be likened to fire.

When the process of cleaning off the old varnish has been completed, the picture should be wiped over with turpentine, and when this has evaporated it is ready for varnishing, assuming that there is no need for restoration, or, rather, re-painting. Should any of the work be in need of retouching, the picture should be lightly varnished so that the colours stand out in their true value and the effect can be noted with a greater degree of accuracy.

Blisters and "Flakings."

If a picture is blistered or the paint shows signs of flaking off, an application of strong varnish or gum to the back of the canvas so that it penetrates the material and reaches the paint is a good and safe remedy. The picture should be laid face downwards on a clean surface and the varnish (spirit) well rubbed in with a stiff brush. When dry the varnish will serve to hold the paint to the canvas.

Protecting Pictures.

All valuable pictures should be protected against the ravages of time and the effect of varying temperatures, &c. This is best effected by glazing and covering up the back with some waterproof paper or other material. A freshly painted picture should not be varnished for twelve months at least, during which time the oil will rise to the surface of the paint, and may be wiped off as it accumulates. By these means the colour of the paint is preserved, and when the picture is thoroughly hard and has been varnished with pure mastic, the fear of degeneration will be greatly reduced. In order to remove discoloration due to oil exuding and drying upon the surface of an unvarnished painting, it is necessary to use friction and a mixture of whiting and finely powdered pumicestone. This will cut away the surface, so that extreme care is necessary in order to avoid serious injury.

Pastel Drawings.

Portraits in pastel are singularly delicate works of art, and should dirt or dust have settled on the surface the greatest care must be exercised in its removal, as the pigment is in reality a specially prepared crayon, and the slightest touch will dislodge it. Therefore, do not attempt any rubbing or flicking, but blow the surface with a pair of bellows, and when replacing the pastel in the frame see that all avenues where dust can enter are duly closed by means of pasted paper.

Viewed casually by anyone not very conversant with the subject of pastel drawing it must be candidly admitted that few would be inclined to regard this art of drawing in chalks as anything but a fragile one, and the permanence of its colouring as doubtful in the extreme, even when properly protected, as the picture should be, with glass. The fact, however, remains that old pastels are existent which have preserved their beauty and delicacy of colouring far better than either water-colours or oils of a like period. This is all the more remarkable

when one comes to consider that unlike the latter they have not the same vehicles in the constituents used to bind them together. To what therefore may be ascribed their relatively greater permanence and resistant action to what are known as the chemical rays of light?

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